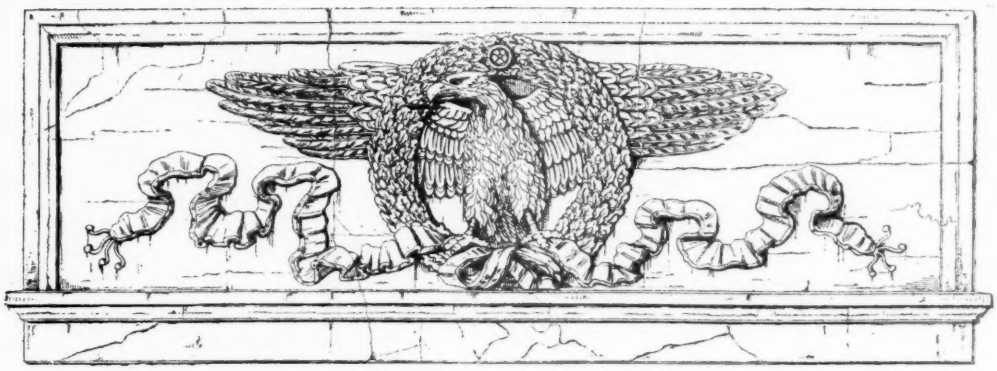


ASYLUMS AND ASYLUM PLANNING.

By GEORGE T. HINE [*F.*].

Read before the Royal Institute of British Architects, Monday, 18th February 1901.*

ASYLUM construction constitutes a special branch of architecture, and while embracing the study of almost every description of building, from a church to a cowshed, the art of combining so many dissimilar structures into one harmonious whole, with the engineering skill necessary to provide for and supply heat, light, and water to what is practically a little town, makes asylum architecture an almost distinct profession in itself. Further, asylums are built for people who cannot take care of themselves, and who have to be watched, nursed, and provided with employment and recreation under conditions inapplicable to sane people; and to provide for all these, while the subjects are under enforced detention, a very special knowledge is required to make their lives bearable, and, as far as possible, comfortable.

There is much to be said on the subject, and I find it difficult to determine what to refer to and what to leave unsaid; but in order to make my Paper of some use to the student of this branch of architecture I shall confine myself chiefly to asylums at home and their most fitting form of planning, and shall limit my excursions into foreign countries to a passing reference to some of the most interesting examples.

I propose to commence with a brief history of asylum building, describing some of the most notable erections, so as to show the evolution of asylum planning; and shall conclude with a description of an ideal asylum of the present day, of the most suitable type for this country.

In speaking of asylums it must be understood that I refer to public institutions erected by borough or county authorities, and not to establishments for paying patients, which generally demand or obtain a different treatment.

Architecturally speaking, asylum designing resolves itself into a question of planning, supplemented by the consideration of the many matters of detail and equipment necessary to fit the building for the reception of an irresponsible class of residents; but in attaching primary importance to the plan, it must not be supposed that no consideration for exterior design need be exercised. These buildings, however, are forced upon the public, with no power of veto; are paid for by them, and, being for strictly utilitarian purposes, should be constructed on the most economical lines consistent with efficiency and durability. The architect, therefore, must rely for external effect on the skilful grouping of his buildings and

* A number of plans exhibited on the reading of this Paper are not reproduced here. The twelve plans published with this are referred to in the text as "Plates I. to XII."

their fair proportions, and must aim at attaining a simple dignity to compensate for the lack of elaboration in detail.

That lunacy has been known as a disease in earlier days of the world's history is disclosed in many ancient writings, as well as in Holy Scripture; but there is no reliable evidence of buildings erected solely for the accommodation of the insane before the Middle Ages.

Early in the fifteenth century we have record of a most sumptuous building erected in Cairo by the Sultan Kalan for the exclusive use of lunatics.

The Hôtel Dieu in Paris was founded in 656 A.D., but it was not until 1660 that, by a decree of the governing body, two small wards were set apart for the use of persons suffering from mental disease. In 1641 the asylum of Notre Dame de la Paix at Charenton was founded for the reception of lunatics: it was opened with seven beds, and is now one of the largest of these institutions in France.

Gheel, in Belgium, for many centuries has been a resort for lunatics, who originally went to worship at the shrine of a princess named Dymphna, decapitated by her father, her relics being said to have a marvellous curative effect on persons suffering from mental disorder. Here patients were brought to be cured, boarding with the peasants of the district, and from this has gradually developed a colony of resident lunatics numbering to-day nearly 2,000, who, while still chiefly boarding with the inhabitants of the place, are now under a strict code of regulations framed by the Government. This colony has probably initiated the system of boarding out lunatics which prevails in Scotland, notably in Fifeshire.

While foreign countries have had their early asylums, we in England have indisputable records of an earlier one in a hospital at Barking, founded, with the King's consent, in 1370, by a priest named Robert Denton, "for the sustentation of poor priests and other poor men and women who were sick of the phrenzie, there to remain till they were perfectly whole and restored to good memorie."

Bethlem Hospital was founded in 1247; but it was not till the year 1403 that we have any record of lunatics being received here, when in the report of a Royal Commission we read that "six men who were lunatic were confined there, and the hospital possessed for securing such persons six heavy chains of iron with padlocks, four pairs of manacles, and two iron stocks." Bethlem was originally founded as a priory, and was situated in Bishopsgate Street, and thus to the Church belongs the honour of having instituted the first retreat for the mentally afflicted in this country; but how the poor wretches were treated who sought asylum within its walls is best described by Dr. Conolly, who portrays the terrible sufferings of the patients incarcerated in Bedlam; and even as late as the early part of the nineteenth century patients were chained by the arm or leg, with only just enough chain to allow of their standing upright or sitting on a bench close to the wall. There they remained day and night, dirty, ill-fed, and utterly neglected, excepting on Sundays, when they were exhibited to the public, who flocked in to see the mad people caper, the gaolers being allowed to charge a penny or twopence a head to see the show.

Of other early buildings of the class in this country were St. Peter's Hospital at Bristol, founded in 1696; the Manchester Royal Lunatic Hospital in 1706; Bethel Hospital, Norwich, in 1713; St. Luke's Asylum, London, in 1751; and the Liverpool Royal Lunatic Hospital, in 1792. Up to the end of the eighteenth century such lunatics as were not at large were confined in prisons or in the few houses then erected for their accommodation, and were frequently treated worse than felons—often with the greatest cruelty. But in the year 1796 the "Retreat" at York was founded by the Society of "Friends," an institution where an intelligent system of treatment was initiated and carried out under the able direction of Mr. William Tuke. This institution and the novelty of the treatment constitute

quite a landmark in the history of lunacy, and being inaugurated at a time when public interest in insanity was excited by the condition of the King (George III.) a spirit of inquiry into the housing and care of the insane was aroused, which resulted in the passing of an Act in 1818 permitting county justices to erect asylums for the accommodation and treatment of pauper lunatics. This Act, however, being only permissive, resulted in comparatively little, until 1845, when another Act was passed, making it compulsory on local authorities to provide asylums for the insane in boroughs and counties throughout England and Wales. This Act was the outcome of a Royal Commission instituted a few years earlier, when a body entitled the Metropolitan Lunacy Commissioners visited asylums and hospitals all over the country, collecting evidence, the harrowing details of which showed the urgent need for vigorous action on the part of the Government in order to put an end to the terrible abuses even then being perpetrated in relation to lunacy. The Act of 1845 established the present Lunacy Commission with six paid commissioners, whose work of inspection and direction has done so much to ameliorate the condition of the unfortunate people under their care.

It is interesting to note that in 1845 there were only about thirty pauper asylums and hospitals, the latter chiefly for private patients, besides a number of registered houses, and, as nearly as could then be estimated, about 17,000 pauper lunatics in England and Wales. Now (in 1901) there are no fewer than 100 county and borough asylums and hospitals, together with something like seventy registered houses, all of which have to be inspected once, in some cases four times, a year, and 107,000 certificated lunatics to be interviewed by the Commissioners; and this in addition to an enormous amount of office work, including *inter alia* the careful consideration and amendment of the plans of all new asylums and additions in the country, and with no increase in the Commission since 1845. It would seem that some of the offices in His Majesty's Civil Service are no sinecures.

Scotland and Ireland have also their separate Acts relating to lunacy: in Scotland on somewhat similar lines to those in this country, with a Board of Commissioners, but in Ireland the construction and direction of asylums are more directly controlled by the State. Other countries have also their laws relating to asylum construction and management, into which, however, I cannot enter now; and, the object of this Paper being primarily directed to the planning and construction of the modern asylum, I need only refer to the older buildings in so far as they illustrate the evolution of asylum planning, resulting in the system which obtains in this first year of the twentieth century.

Prior to the passing of the Act of 1845, there were only eighteen public asylums in England and Wales, in addition to about a dozen hospitals and a large number of licensed houses, nearly 150 in all, being about double the number which exist to-day. After the passing of the Act of 1845 no less than fifteen asylums were built and opened in the following six years, including that of Derby County, one of the best of the period, and of which I exhibit a plan. It is to me an interesting fact that the earliest of these eighteen asylums still in use is the old one at Nottingham, opened in 1812, now the exclusive property of the county; and that sixty-three years later, in 1875, I made my *début* as an asylum architect by winning the competition for a new asylum for the borough, to be erected in my native town.

Between the Act of 1845 and the passing of the Local Government Act of 1888 county and borough asylums were erected from time to time, until, in 1890, the number of pauper asylums in England and Wales had increased to seventy, and these were, generally speaking, full to overflowing, the justices under the old administration being anxious not to burden the rates until it was absolutely necessary to add to existing buildings; but in the last ten years under the new administration nearly thirty new asylums have been either erected and opened or are authorised and in progress, as well as numerous enlargements of existing buildings.

Having thus briefly sketched the history of asylum legislation in this country, I must turn to the buildings themselves, which it is necessary to study step by step to appreciate the latest developments in the asylum of to-day.

In the early days of manacles and fetters asylums were constructed on the model of prisons—massive walls and dungeon-like cells, with vaulted ceilings of masonry or brickwork, the window openings being barred with iron stanchions, and the day rooms being nothing more than passages of communication to the single rooms generally occupied by the patients both day and night, like felons in their cells. In course of time, as less restraint was exercised and patients were allowed a certain amount of freedom, the passages became widened into galleries, and, later on, an occasional bay window was introduced to break the long line of wall. Still the old plan was followed, and the long gallery, with single rooms opening out of it, was the only recognised principle on which an asylum could be built, and which in time became known as the corridor type of planning; most of the earlier asylums were constructed in this way, generally with a separate single room for each patient.

This type of asylum was usually built in quadrilateral form, with wings extending at right angles to or parallel with the main building. The Derby County Asylum at Mickleover is a good example of this type [see plan], but had in addition to the galleries a square day room at the end of each wing, used as a dining-room. The Somerset and Bath County Asylum at Wells, built from the designs of the late Sir Gilbert Scott in 1848, is another example of the same type, and externally is a fine building of Gothic design, but internally is so faulty in the light of modern planning that it is difficult to advise the committee in their work of modernising it, without the practical destruction of half the building. A first step towards this work of reformation which I am now undertaking is a detached house for the medical superintendent, thus liberating rooms which, as you will see from the plan, are in the very heart of the building adjoining the main entrance, and which can be conveniently adapted for administrative and official purposes.

In the earlier days there was little or no classification, and it was not till some years later that any attempt was made to design wards to meet the varying forms of insanity.

Sir Henry Burdett, in his *Hospitals and Asylums of the World*, attempts to classify asylum plans as follows :—

1. The Irregular or Conglomerate type.
2. The Corridor type.
3. The Pavilion type.
4. The Corridor-Pavilion type—and so on, giving the impression that each type represents a separate order of architecture.

There is undoubtedly a distinction between the corridor and pavilion systems, but all other types are more or less developments of these two, and had some of our most recent asylums been built at the time Sir Henry Burdett published his book, he would, I think, have been puzzled to classify them without inventing new terms. Bexley Asylum, for example, is a development of the corridor, pavilion, and villa types, possessing features of all of them, but not so distinctly as to warrant the asylum being classified under any of these so-called types.

But to revert to the progress made in asylum planning, the Act of 1845 and the influence of the new Board of Commissioners began to make themselves felt; and while the internal arrangements of asylum buildings may have savoured less of restraint, the principle of planning on the corridor system still prevailed. The first development was an attempt at classification by the introduction of a ward for the sick and infirm on each side of the building. At the same time the number of cells were reduced, and more patients were allowed to sleep in associated dormitories.

In the twenty years that followed the opening of the Derby County Asylum in 1851 eighteen county and five borough asylums were erected and opened, all of which were built in a more or less modified form of the corridor system, and of which the City and County Asylum at Hereford, opened in 1871, is an excellent example of the period [Plate I]. The architect was the late Mr. Griffiths, County Surveyor of Staffordshire, whose contributions to asylum architecture were generally in advance of the time. His asylum at Berrywood, Northamptonshire, built four years later, in 1876, possesses some very good points.

Hereford Asylum, as will be seen from the plan, has features distinctly in advance of earlier asylums. Its entrance and official block is on the north side, leaving the entire southern frontage for the patients' airing courts and recreation grounds. Some classification is also attempted in the four distinct and separate wards on each side, all being connected with the administrative centre by covered corridors, so that other wards need not be used as passages to and from the recreation hall and administrative department. The galleries are wide and broken by bays, and in addition to these there are a number of well-shaped day-rooms. The single rooms are fewer, and dormitories are introduced on the same floor as the day-rooms. The sanitary annexes, containing w.c.'s, bath-rooms, &c., are in projecting spurs to the back of the building, with cross-ventilated passages from the wards. A large recreation and dining room occupies a central position, for use by both sexes. The medical superintendent's house is a separate building, connected with the asylum by a covered corridor. These and other improvements mark a distinct advance in asylum planning.

Among other asylums worthy of note which were erected during the last-named period are the Berkshire Asylum at Moulsford [see plan] and the East Riding Asylum at Beverley, both built on almost identical plans by Mr. C. H. Howell, for many years the consulting architect of the Lunacy Commissioners. These two asylums have many good features, including northern entrances, a separate house for the superintendent connected by a covered corridor, and a certain amount of classification. The Surrey Asylum at Brookwood, also built by Mr. Howell, was opened in 1867.

It was not until the "seventies" that any special provision was made for epileptics, who, being subject to fits, require constant supervision, and thus a plain square room, without recesses or projections behind which patients may temporarily secrete themselves, is the most desirable form of accommodation. In 1874 the Lunacy Commissioners published a plan designed by Mr. Howell for an epileptic ward [see plan], and this has been constantly adopted with trifling variations in nearly every asylum designed within the last twenty years.

The decade of 1871 to 1880 gave birth to further evolutions in planning. The county of Middlesex erected a third asylum at Banstead, opened in 1877, designed on the pavilion system in the form of the letter H. This was an absolute copy of the Metropolitan Asylums Board's imbecile asylum at Leavesden, and was intended to serve as an overflow building for quiet chronic cases; but the plagiarism did not pass without penalty, and before the building was ready for opening the exigencies of lunacy in the county required that *all* classes of lunatics should be received into the new asylum, and the doctors have ever since had to contend with the difficulty of housing all classes of patients in large wards only suited to the quietest cases. Imagine 120 acutely maniacal and refractory patients in one day-room, and sixty of the same class sleeping in one dormitory! This critical condition, however, does not, happily, now exist, as, by alterations and additions from time to time, some more suitable wards have been constructed for special cases. The plan [Plate III.] will show the general arrangement, with some of the wards in their original crude form; the two latest additions for sick and infirm patients on the female side and acute wards on the male side were added under my direction in 1893.

But during this decade perhaps the most notable departure in planning is met with in the Lancashire County Asylum at Whittingham [Plate II.]. This asylum is designed in what Burdett describes as the corridor-pavilion style, and referring to it he says: "This is beyond doubt one of the finest specimens of asylum architecture in England, and its leading features show at once that it was designed by a medical superintendent." This latter statement I am not concerned to dispute; but *palmam qui meruit ferat*—to Dr. Holland, the first superintendent, the greatest credit is undoubtedly due for the suggestions and assistance he gave to the architect.

Other asylums built from 1871 to 1880 are Northampton, already referred to; Wadsley, the second asylum for the West Riding of Yorkshire; Parkside, Cheshire; and Chartham, the second asylum for the county of Kent; while for boroughs, Portsmouth, Norwich, and Nottingham Asylums were erected and opened. None of these calls for comment, beyond that I think at Nottingham is found one of the earliest special wards for epileptics.

From 1881 to 1890 only four county and four borough asylums were completed and opened, the four county ones being the second Gloucestershire and the Surrey County Asylum at Cane Hill in 1883 [Plate IV.]; the second Glamorgan County Asylum at Parc Gwilt; and the third West Riding Asylum at Menstone [Plate V.], all four being of the pavilion type, and in three of them a new method of arranging the wards in echelon was introduced.

The four borough asylums were those at Rubery Hill for Birmingham, Hull, Exeter, and Derby, but none of them shows any very novel features. It may be noted that Exeter was the first newly built asylum lighted by electricity, the arrangements being, however, very inadequate.

The Gloucestershire second county asylum, of which, by the courtesy of Messrs. Giles, Gough, and Trollope, the architects, I exhibit a plan, is erected on the pavilion system, the blocks being arranged in echelon. The same architects a few years later built the Glamorganshire second asylum at Parc Gwilt on somewhat similar lines. The Gloucestershire Asylum was the first of this type erected in this country, and may be said to have originated the oblique or broad-arrow form of corridor, now so commonly adopted in asylum designs.

The plan shows the asylum as it will be when completed for 860 patients, and while each block has a direct southern aspect and free air space on all sides, the length of corridor is enormous in proportion to the accommodation, and the officials in going their rounds have to descend from the top floor of one block, retrace their steps to the main corridor, and so pass on to another block. Imagine the length of corridor in an asylum for 2,000 patients, designed on this principle, and the wearisome journeys the doctors would have to make in going their rounds, or the length of corridor to be traversed by attendants in going to and from kitchen and stores.

Four years after Gloucester was completed the West Riding third asylum at Menstone was opened. This is planned also on the broad-arrow principle, the wards being somewhat similar to those at Gloucester, with improvements in the way of centralisation and arrangement of corridors. A plan of this asylum [Plate V.], for which I am indebted to the architect, Mr. Vickers Edwards, shows this building considerably enlarged from its original dimensions, and now accommodating nearly 1,600 patients. The blocks generally are only two stories high, this being a step in advance of Gloucester and many of the old asylums with their three stories, the third floor being always reserved for dormitories.

The Surrey second county asylum at Cane Hill, now one of the London county asylums, of which I also exhibit a plan [Plate IV.], was designed by Mr. Howell, and is the most important of his works. Originally erected for 1,100 or 1,200 patients, it is now extended to its full complement of 2,000.

The plan, which by the courtesy of Mr. Clifford Smith, the engineer of the London

Asylums Committee, I am allowed to exhibit, shows that the building is on the pavilion type, the blocks radiating from a main corridor of horse-shoe form. There is a diversity of opinion about this building. Burdett speaks somewhat disparagingly of it, but the officers who have to work it, and whose opinion I would rather accept, regard it as one of the best of the large asylums hitherto erected. I am inclined to agree with them, though, like most buildings, it is not faultless: some of the blocks are too close together, and suffer in consequence from want of light and air. The floor levels throughout the building vary, in some cases very materially, necessitating flights of steps in the corridor, when, I think, by a more careful consideration of the surface levels of the ground and a little more excavating, much of their irregularity might have been dispensed with. Surface digging is comparatively cheap, and generally pays for the additional foundations required in a stepped building, with a result of the greatest value in the working of a large asylum.

While referring to this I would urge on all architects designing asylums to give a first consideration to the site. In very many of the plans which come under my official notice this appears to be the last point thought of, and the buildings are generally left to adapt themselves to the site rather than the site being made adapted to the buildings. To the lay mind the removal of soil in bulk assumes an importance which is quite erroneous; but giving it its full value, what is the small additional capital charge compared with the perpetual inconvenience and extra cost of working a building filled with feeble, irresponsible patients, which has numerous steps on the ground-floor, up and down which food trolleys as well as patients have constantly to be conveyed?

During this decade the Local Government Act of 1888 became law, and in the following year county asylums throughout the country passed from the care of the Justices into the hands of the new County Councils. In London the four Middlesex asylums, including the new one at Claybury, which I had the honour to build as the result of a limited competition in 1887, also the Surrey County Asylum at Cane Hill, became the property of the London County Council, the old Surrey Asylum at Wandsworth being transferred by arrangement to the County of Middlesex. Both these last-named counties failed to look sufficiently far ahead, and have now to erect new asylums at increased cost, that for Middlesex being designed by Mr. Rowland Plumbe, and that for Surrey by myself.

Between the year 1891 and the close of the century seven county and three borough asylums have been erected and opened—viz. Claybury and Bexley for London, West Somerset, West Sussex, Isle of Wight, Cheddleton (Staffordshire), and Hill End (Hertfordshire); while for the boroughs, Plymouth, Sunderland, and Middlesborough are represented. In addition to those opened, there are eighteen asylums in course of erection or authorised, making twenty-eight asylums in England and Wales alone for which county and borough authorities are responsible since the Local Government Act came into force in 1889.

Of the ten asylums already opened I can only briefly refer to some; and if among them I include asylums designed by myself my egotism must be excused on the ground that I have plans already prepared which I can exhibit.

Excepting the Borough Asylum at Plymouth, designed by an old Fellow of the Institute and cousin of mine, Mr. James Hine, Claybury was the first to be opened in this decade, and is perhaps the most notable on account of its size and type of plan.

Whatever credit is due for the arrangement and classification of the wards must be shared by the committee who issued the most comprehensive instructions to architects, and particularly to their energetic chairman, Mr. A. W. Gadesden, and Dr. Claye-Shaw, of Banstead, who formulated the instructions.

In designing this asylum the question which seemed to me of primary importance was

that of accommodating so many patients (2,000) within reasonable distance of the administrative centre without prejudice to the position and aspect of the wards. The plan I adopted was a modification of the echelon type, the wards being approached from obtusely oblique corridors, the pavilion system being almost a necessity from the conditions issued.

The asylum is built on the top of a hill, falling all ways, and by removing the apex of the mound, representing nearly 100,000 yards of soil, and which was well disposed of in filling up a valley to the north of the asylum, a level plateau was obtained, sufficient to allow of about half the patients' blocks and the whole of the administrative department being erected at one uniform level; the remaining wards are slightly lower, but in no case more than 5 feet below the central buildings.

At Claybury the principal entrance and the official block are on the south side, the only instance in which I have adopted this position; but here the site favoured an approach from the south, as the road winds up to the asylum through a wood, and is screened from view of the patients' wards and airing courts. In a large asylum this way of approach is sometimes the only possible one; and when it can be adopted, the north side is left free for the working departments and the roads for heavy traffic.

It will be seen by the plan [Plate VIII.] that the entire administrative department, recreation hall, kitchens, stores, and laundry buildings are flanked by two service corridors communicating with the corridors leading to the wards, and thus patients of both sexes, with their nurses and attendants, can approach the central departments without either sex coming into contact with the other—a very necessary consideration in the planning of these large institutions. It is not easy to realise from the plan that the accommodation provides for 1,200 women on one side, while on the other are wards for only 800 men; the blocks on each side, though similar in outline, are different in both size and detail.

The six infirmary blocks to the south and the two blocks for epileptics are two stories high, the remaining blocks being three stories high. The epileptics are housed with day-rooms on the ground floor and dormitories above, this being by an instruction of the committee from which I differed and protested against, but without avail; and I am only surprised that the Commissioners finally allowed this to pass on condition that a small dormitory should be constructed on the ground floor for the use of those patients whom it would be particularly dangerous to send upstairs.

The chapel occupies a central position on the south front between the entrance block and the medical superintendent's house, and is attached to the asylum; an arrangement which is now regarded as open to objection by the Lunacy Commissioners, who ask for detached chapels in the grounds, as being more consistent with the patients' preconceived ideas of attending religious worship.

Time will not allow of my saying more about Claybury, but I must not omit to state that the old mansion house on the estate, which was enlarged and adapted as an asylum for fifty private patients, has been already absorbed by the great influx of pauper patients, and the two buildings originally designed for 2,050 patients now accommodate nearly 2,500, in addition to about 400 of the staff, giving a total accommodation for nearly 3,000 people in this asylum. I should add that there is a very complete and well-fitted building, comprising physical and microscopic laboratories with photographic and lecture rooms, in connection with the mortuary and post-mortem rooms, for pathological study, where Dr. Mott and his assistants are engrossed in researches which we hope will tend to limit the growth of insanity. There are also extensive farm buildings of quite a model character erected on the estate.

The other asylums opened between 1891 and 1900 are those at Cotford, in Somersetshire, for 450 patients, with provision for extension to 600, on the pavilion principle, by

Messrs. Giles and Gough; the asylum for West Sussex, designed by the late Sir Arthur Blomfield, and now being added to by his sons—a very nice little asylum, also on the pavilion type, with an entrance on the north side and a charming detached chapel; an asylum near Newport, in the Isle of Wight, by Mr. Jacobs, of Hull, who also designed the Borough Asylum at Derby; an asylum near St. Albans for the Hertfordshire County Council, of which I exhibit my plan [Plate IX.]; the third asylum for the County of Stafford at Cheddleton, the best, in my opinion, of Messrs. Giles, Gough, and Trollope's designs, and of which they lend me a plan to exhibit; the London County Asylum at Bexley, of which more hereafter; the three small Borough Asylums of Plymouth, Middlesborough (the last asylum designed by Mr. Howell); and the Sunderland Asylum by myself [see plan].

Referring again to Bexley Asylum, the small plan exhibited shows it designed for the accommodation of 2,000 patients, in which, I think, the villa system is first introduced in the original design of a pauper asylum in this country, but only on a tentative scale of three villas holding thirty-five patients each, and a detached hospital for fifty phthisical cases or others requiring isolated treatment.

In the main building I have aimed at securing continuous supervision—a difficulty which I referred to when speaking of Gloucester; and it will be seen by the plan that all the wards communicate with one another, and an officer may pass from one end of the male or female side to the other without retracing his footsteps or being obliged to return to the main corridor.

Half the asylum is designed for the accommodation of infirmary, recent, and acute cases. All the epileptics in the building are housed entirely on the ground floor both by day and night, the chronic quiet cases being on the first floor above them; and the working patients, whose work on the farm or in the laundry enables them to dispense with the frequent use of the airing court, are housed in blocks fronting the two large interior courts. This building is planned with a view to centralisation; and, considering its magnitude, the wards are all arranged within reasonably easy reach of the administrative centre. The entrance block is on the north front, and the chapel—a detached building—is a few yards to the north of this, and may be readily approached from both sides of the asylum. The medical superintendent's house, which hitherto the Lunacy Commissioners have required to be in direct communication with the asylum by a covered corridor, is now, for the first time in an entirely new asylum in England, made a separate structure; an arrangement which superintendents for years have been striving for.

While referring to Bexley Asylum I should add that the London Asylums Committee having to build another asylum and being well satisfied with the one at Bexley—perhaps the cheapest asylum erected of late years—arranged with me to use the same plans, with a few modifications and improvements, and provide them a second edition of the same asylum at Horton. I exhibit a ground-plan of the main asylum at Horton [Plate X.].

I also exhibit a plan of a small asylum for 420 patients [Plate XI.], now in course of erection near Sleaford for the Kesteven division of the county of Lincoln, and for which I obtained the commission as the result of what I hope will be my last competition.

I must not omit to refer to the temporary buildings which the London Asylums Committee have found it necessary to add to several of their existing asylums in order to keep pace with the growth of lunacy. These erections, chiefly of wood and iron, have been put up at Hanwell, Colney Hatch, Banstead, and lastly at Horton Manor, under the direction of Mr. Clifford Smith, and provide accommodation together for 1,700 patients at a total cost of about £173,000, averaging £100 a bed; a low rate compared with the cost of permanent structures, but very costly when their limited life is considered. I exhibit a plan of the buildings at Horton Manor lent me by Mr. Clifford Smith.

I have thus briefly dealt with all the asylums in England and Wales erected and opened during the past century; but before passing on to my next chapter I will call your attention to the plan of an asylum which I enlarged some few years ago in a way which may, I think, be interesting to study.

The old Dorset County Asylum at Forston, opened in 1832, had been supplemented in 1863 by a new asylum at Charminster, accommodating about 340 patients. About the year 1890 it became necessary to close the asylum at Forston and enlarge the more modern building at Charminster, increasing the accommodation from 340 to 740. An open competition was instituted, in which the competitors generally showed extensions radiating from the existing building, but leaving no room for extending the administrative departments in the centre, which, none too large for the original number of 340, was utterly inadequate for the enlarged asylum of 740. Following the lines of a recent addition I had made to the Nottingham City Asylum, I sent in a design showing the original building entirely devoted to male patients, with a new annexe to the east of it for women, and new hall, kitchens, and laundry buildings between the two. The plan [exhibited] shows both the old and new buildings as they now are, the old buildings occupied by the men being tinted blue, and the recent additions pink. The old laundry buildings, hatched blue and pink, were gutted and converted into a ward for male epileptics.

The additions contain boiler and engine houses, where steam is generated to do all the work of the asylum—viz. heating, hot water supply, cooking, laundry work, pumping, and the electric lighting of both old and new buildings. I should add that by utilising the exhaust steam from the dynamo engines for heating purposes the greatest economy is effected, and Dr. Macdonald, the able superintendent of the asylum, after making a series of tests, claims that he gets his lighting practically for nothing.

The plan of Nottingham City Asylum [Plate VII.] shows this principle of extension, where, however, the old laundry was enlarged and a second kitchen added to the annexe, instead of one new central cooking department, as at Dorchester.

Before treating of asylums in foreign countries, I must say a few words about our Scotch asylums. I have refrained from describing them with the English and Welsh asylums, as they are administered by a separate authority—a board of commissioners whose duties, though similar in many respects to those of the English Commissioners, are exercised under different laws and with different results in the planning of their buildings.

Of the half-dozen old royal asylums, being those instituted under Royal Charter, that of Edinburgh at Morningside is certainly the most notable, chiefly on account of the recently erected buildings at New Craig House, the conception and carrying out of which are mainly, if not entirely, due to the ability and energy of Dr. Clouston, one of the most eminent specialists in lunacy matters of the day. The new buildings are exclusively for the use of paying patients, and consist of the main institution, constructed and fitted up on almost palatial lines, and a number of detached villas.

In these asylums, where paying patients are received, all additions and improvements are generally paid for out of the profits derived from the private patients: this, I believe, was the case with the New Craig House at Morningside. In this country, at Northampton, Mr. Bayley has purchased estates, and from time to time constructed one of the largest and most complete asylums in this way.

Of the Scotch district asylums, corresponding with our county or borough asylums, the Barony Parochial Asylum at Lenzie, near Glasgow, opened in 1875, was, at the time it was designed, one of the most advanced buildings of the day. Later on, the Govan Asylum at Hawkhead and the Glasgow Asylums at Gartloch and Hartwood best illustrate modern ideas in asylum planning north of the Tweed.

I have prepared a plan on an enlarged scale of the Gartloch Asylum, from which it will be seen that the building comprises two distinct blocks designated the "asylum section" and the "hospital section," the latter being reserved for the treatment of all the sick and infirm in the building, and also for the reception and treatment of acute and curable cases, while the "asylum section" is designed for the accommodation of all other classes, mainly the chronic and incurable cases.

The Scotch system of housing in the hospital the curable and incurable cases together is encouraged by the Scotch Lunacy Commissioners, who consider it undesirable to separate entirely the two classes. Dr. Conolly entertained the same view, and says in his book on Asylum Construction, "I believe the absolute separation of the curable from the incurable to be neither practicable nor desirable, and I know that the incurable patients are generally fitter companions for the curable than the curable patients are."

On the other hand, many of the more thoughtful of our medical experts in this country hold that a hospital, totally distinct and apart from the asylum, for the reception and treatment of new cases, who are not on admission diagnosed as hopelessly incurable, must prove an important factor in the cure of lunacy. It is well known that many forms of insanity are readily curable at an early stage, but by neglect or unfavourable conditions often result in permanent and incurable disease. Every inducement therefore should be given to the public to place their friends under treatment when the first symptoms of mental trouble appear; and with a hospital as a separate and distinct institution, and which does not share in the popular stigma attaching to a lunatic asylum, there will be less reluctance, both with the friends of the patients and patients themselves, to enter a building which by its very name holds out a prospect of cure.

An acute hospital for curable patients should be constructed on different lines from the main asylum, and should afford every opportunity to the doctors for the separate or special treatment of newly admitted patients, and if curable cases are to be found who thrive better in the society of chronic lunatics, let them be transferred to the main asylum, without leaving the majority to suffer, for the sake of the few, a terrible evil which prevails far too often in many ways in some of our large asylums.

In 1889 the London County Council appointed a committee to inquire into and report to the Council upon the advantages which might be expected from the establishment, as a complement to the existing asylum system, of a hospital with a visiting medical staff for the study and curative treatment of insanity. The committee held a series of meetings, inviting a number of leading experts in the medical profession to give evidence, and published a very comprehensive report showing that the evidence adduced was greatly in favour of the scheme. They summed up with a strong recommendation in favour of the establishment of such a hospital; nevertheless the London County Council reversed the decision of their committee, and have gone on building asylums on the old lines. A later recommendation of the London Asylums Committee for the establishment of a number of receiving-houses throughout London is still under consideration, but special parliamentary powers will have to be obtained before their recommendation can be carried into effect.

In the meantime other county authorities in England are interesting themselves in the question, and a hospital for the reception and treatment of curable cases has already been erected at the old West Riding Asylum at Wakefield [see Mr. Vickers Edwards's plan], while the first building of its kind in this country, forming part of an original scheme, is now in course of erection at the New East Sussex Asylum at Hellingly, the plans of which I exhibit, and will refer to shortly. Other counties are following suit in this respect. Surrey and Worcestershire, for which counties I am now preparing plans for new asylums, propose to do the same, and in the new asylum for Middlesex at Napsbury, designed by Mr. Rowland Plumbe, a separate building is included for acute cases, but on the Scotch principle, in which

provision is also made for the physically sick. [See Mr. Plumbe's plan, kindly lent for this evening.]

This digression on the subject of an acute hospital, which I could not refrain from referring to as being so important an evolution in modern asylum planning, seemed to me to fit in with a description of Scotch asylums, where the principle is now generally adopted, though, as before explained, in a somewhat different form. You will see from the plan of Gartloch Asylum [Plate VI.] the two buildings side by side, detached but close together. The entire asylum accommodates 560 patients—390 in the asylum section and 170 in the hospital section.

The asylum section is a building on the pavilion principle, two stories in height, and comprising two wards on each side for convalescents and chronic cases, the day-rooms being on the ground floor and the dormitories above. There is a large dining-hall on the ground floor, with a recreation hall over it. The administrative department occupies the centre, flanked by the workshops and laundry buildings in the usual way. The plan is simple but effective, its simplicity being more easily possible in so small an asylum. At right angles to the main asylum is the hospital section, where 170 cases may be housed. Flanking the entrance block and official rooms are two wards for recent cases requiring constant observation, the day-rooms being on the ground floor, with dormitories above.

The remainder of this building is only one story high, and is devoted to patients who for any reason, bodily or mental, need special attention: one wing is set apart for noisy cases, each patient sleeping in a separate single room. The two front wings are designed as day-room dormitories, such as a sick ward would be in a general hospital; while another dormitory and day-room, with an exercising corridor at the back, may be occupied by patients not confined to bed. A small ward at each end, cut off by a cross-ventilated corridor, is set apart for infectious cases. This asylum is erected and fitted up in almost a palatial manner; the building is entirely of stone in the Scotch baronial style, no expense having apparently been spared either in the external treatment or interior finish.

The new Govan Asylum at Hawkhead is very similar in plan, and possesses one of the finest recreation halls in the country, with a stage equal to that in many modern theatres.

Hartwood, another recently built asylum for the Glasgow district, must speak for itself in the plan I exhibit. I have not myself seen this asylum. A very excellent detached block is provided here as a nurses' home, being another important step in advance.

While there are many other asylums I should like to refer to, the time at my disposal will not allow me to say more than I have done, and to attempt to describe to-night the Continental asylums in more than a passing way would, I am afraid, bring down upon me a just rebuke for so severely taxing your patience.

Of the asylums on the European continent there are a few that merit some attention, including the German ones of Dalldorf and Herzberge, near Berlin, also the epileptic colony of Wuhlgarten at Biesdorf, of which I exhibit a number of drawings given me by Herr Blankenstein, the State Architect, on my last visit; also the three asylums of Uchtspring, Zschadrass, and Alt Scherbitz, in Saxony, and the two asylums of the Rhine Province of Grafenberg, near Dusseldorf, and Galkhausen, near Cologne, the latter being, I believe, the most recently erected asylum in Germany built entirely on the villa system and barely yet finished.

Of French asylums the older ones are not especially interesting, and of the modern ones those of Ville Erard and Ville Juif, near Paris, both on the pavilion principle, have not the same interest as the German ones where the villa system prevails; and therefore I shall, perhaps, best satisfy the uninitiated by giving a brief description of the villa system as seen in the asylum at Alt Scherbitz, which may be said to have originated this type of planning, now adopted more or less in a number of the modern American asylums, and more recently, but to a less extent, in England.

I have reproduced to a larger scale a small block plan published some years ago of the Alt Scherbitz Asylum, which, while giving no detail, is sufficient to illustrate the type of planning. The asylum consists of two sections, the general asylum to the north of the high road comprising wards for the reception and treatment of all new cases, infirmaries for the sick, and wards for the treatment of patients suffering from more or less acute forms of mania, where they are subjected to certain restraining influences; but even in these wards everything possible has been done to dispel the idea of detention, and the buildings are very home-like in character, and to a large extent worked on the "open-lock" system. In the wards for the worst cases the windows are in fairly large squares, very different in appearance from the small narrow panes met with in most of our English asylums; but I ascertained on inquiry that they were glazed with unbreakable glass, somewhat costly, but admirably fulfilling the purpose. The shutters in the single rooms, instead of being like the heavy close boarded framings in use here, are constructed like Venetian shutters, lightly but very strongly made, and, when closed, suggest that the intention is to keep the sun out and not the patient in.

Among other buildings north of the road are those termed the Emperor William Augusta foundation, the cost of which was raised by subscription to commemorate the golden wedding of the Emperor William and Empress Augusta. These are occupied solely by aged and infirm imbeciles of both sexes. To the south of the road is what is called the "colony," comprising a number of villas constructed to hold twenty-five to fifty patients each, also kitchen, laundry, workshop, general hall, and other official blocks and residences. Some of them originally were old farm buildings on the estate altered and adapted to their present uses. The villas are constructed very much like boarding-schools, with day and class rooms on the ground floor and associated dormitories above. I have drawn to a larger scale the plans of one or two of these villas. The doors and windows are open, and the patients come and go as they please, wander about or work in the grounds, enjoying comparative freedom, but are always under the watchful eye of carefully trained attendants. There is no wall surrounding the estate, only a light and easily climbable fence. The gardens surrounding the houses in the central establishment are enclosed with palings grown over with plants and creepers. At one time some of these enclosures were surrounded by walls, but these have been removed, Dr. Paetz, the Director, considering them "superfluous and probably injurious."

The "colony" is bounded on the south by the river Elster, which winds its course at the foot of a steep hill in the grounds covered with trees and undergrowth, and there is nothing to prevent a patient rushing down this hill and plunging into the river.

Great value is attached to residence in the colony, and patients are given to understand that their stay there depends entirely on their good behaviour, and are thus encouraged to exercise self-control. Meals are served in the various blocks and villas, not in a general dining hall, the food being conveyed in a large wagon jacketed and protected to keep in the heat. The building termed "assembly-room" serves the purpose of a village hall, where all entertainments are held, and temporarily also for religious services. There are other rooms for recreation purposes attached to the hall, including a billiard-room.

Much has been said about the relatively small cost of these buildings, but the circumstances under which the various blocks were erected or adapted from existing buildings make the statistics given wholly unreliable as a comparison with the cost of other similar institutions.

American asylums, like most of the works of our transatlantic cousins, contain many original ideas. I must, however, confess to having never visited America, and can only speak of what I have read and seen on paper. I have, however, collected plans of some of the principal ones, and have mounted them together on a stretcher, and for which I am indebted to the courtesy of Dr. Stansfield.

ASYLUMS AS THEY SHOULD BE.

Having thus described—somewhat lengthily, I am afraid—asylums as they are, I will, if not trespassing too much on your time, say something of the possibilities of asylum-designing and describe an asylum as it should be. I would, however, first remind you that ten years ago, when the International Congress of Hygiene selected London as its place of meeting, a Paper was asked for on Asylum Construction. Mr. Howell, who was then *facile princeps* the asylum architect of the day, was unable to do what was wanted. I protested that I was too busy, but was met with the objection that it was the busy men who did the work; and, therefore, thinking I knew something of asylum construction, I finally consented to fill the breach. When I look back at that Paper—a rare occurrence—I think how very little I knew about the subject; and I sincerely trust that no architect anxious to design an asylum will read that Paper in search of inspiration. If I live another ten years and look again at this Paper I shall doubtless repeat these words, and admit, with a sigh of regret, that the longer I live the less I know.

But, to give something more than negative advice, let me recommend the young disciple in asylum planning to humble himself and sit at the feet of his Gamaliel, the asylum doctor; let him confess that while he can draw lines he knoweth not the direction they should run in. To understand the first principles of asylum construction it is necessary to know something of the eccentricities of insanity and the habits and treatment of the insane. Let him, therefore, make friends at all opportunities with these medical experts; and, while he will at first find confusion, in his experience of the old maxim of doctors' differences, he will, by sifting the evidence, in time arrive at many useful conclusions to help him on his way. Personally I gratefully acknowledge the courteous reception I have always experienced from these gentlemen, and the information and advice I have obtained, which have, I know, materially contributed to my success; and I can therefore with confidence say: Study asylum construction in the light of those whose duty it is to look after the insane.

Dr. Conolly, in his work on Asylum Construction, says: "The recovery of the curable, the improvement of the incurable, the comfort and happiness of all patients should be steadily kept in view by the architect from the moment in which he commences his plan." This should be the keynote of the architect's work; and while he may say, "It is my business to build the house, but it is the doctor's duty to cure the patient," he must remember that he can materially assist the doctor in his cure, as well as his protection, of the patient by the careful consideration he gives to the many details of planning and construction of the house which the patient has to live in; and in doing this he will find that he must design buildings which give security without appearance of restraint. The ever-present sense of detention is, in a way, as inimical to cure as were the cells and fetters of the eighteenth century.

Sometimes an architect will find it a difficult matter to induce his clients or their medical superintendents to believe that every pipe on the wall, hook, knob, or other projection is not a source of danger, and he is often asked to protect these, sometimes in so palpable a way as to suggest to patients that they are not allowed to hang themselves up on them. In some of the more advanced asylums you will find the open-lock system prevails, where you can walk from one end of the building to the other without a key; in others every door is locked, and the key is never out of the officer's hand. The system has much to answer for in this respect; and the inevitable inquiry which follows every accident, suicide, or escape is no doubt a source of dread to many—particularly those in charge of very large asylums, like the London ones, accommodating 2,000 patients each. But even in buildings like these I think the best

protection is a well-organised staff of attendants; and I agree with Dr. Clouston that "cure, not mere confinement, should give the keynote of construction, and necessary vigilance on the part of skilled attendants must always be assumed. The older asylums left little for the attendants to do, and this had the worst effect on the patients." The introduction into an asylum of automatic contrivances which will not allow of a mistake, while excellent in themselves, have frequently a pernicious effect on the attendant, tending to make a mere machine of him by robbing him of responsibility.

Again, when the architect has produced his design he will have to pass the ordeal of the Lunacy Board, and will find, perhaps, some of his pet ideas ruthlessly crushed. But let him not be discouraged. He has much to learn, and if he does this gracefully he will find the Commissioners, who have had many years of practical experience in working asylums, ever ready to teach him and explain the reason why. I frankly admit that my plans again and again have emerged from the purging they have received at the hands of the Commissioners, or their consulting architect, greatly improved; and now that there is no consulting architect to show me my faults I have to be doubly censorious on my own plans.

But, leaving these side issues to themselves, we will assume that we have an asylum to design, of fair but not unwieldy proportions—say for 800 patients, with provision for future extension to 1,200. We must first study the site and ascertain its possibilities. If very irregular it will determine, to some extent, the type of building; and if *very* uneven it may be *necessary* to adopt the pavilion system, so that each block will connect with the corridor of communication at one point only. The corridors can slope in any required direction, but steps, particularly on the ground floor, are objectionable. Then the first thing to determine is the principle of construction, whether all in one building, or a main asylum with villas or other detached buildings; and, where it is possible to do so, I would say, introduce a receiving-house—or acute hospital, as now termed—for the reception and treatment of all but the hopelessly incurable.

I gather from statistics obtained from other asylums that this hospital should hold from seven to eight per cent. of the total number of patients. Thus in our asylum, in which we provide for 1,200 when completed, we should build our acute hospital for eighty or ninety; and it is important to remember in designing for a smaller number, with provision for extension, that the ultimate number should always be considered in determining the immediate accommodation for special cases; for the simple reason that chronic, quiet, and working patients *can* be housed in wards designed for other classes, but not *vice versa*; and while it is an easy matter to add plain wards for chronic cases, it would create a serious disturbance to the patients and the working of the asylum if at any future time each of the wards for special cases had to be enlarged.

To illustrate my meaning while I describe our asylum I will refer you to the plans of the new East Sussex Asylum at Hellingly [Plate XII.], now in course of construction, and designed on the most modern lines, the whole scheme having been most carefully thought out by a sub-committee of the East Sussex County Council, with Dr. Hayes Newington at its head, whose wide experience, acquired in many years' association with asylum work, gave his committee an immense advantage in determining the basis on which they should work. Here we start with immediate accommodation for 1,115 patients, and provision for extension to 1,275, arranged as follows:

1. An acute hospital for eighty patients, which, you will see, is near the entrance to the estate, and nearly half a mile from the main asylum.
2. A main asylum building for 840 patients of all classes.
3. Four detached villas, each holding thirty patients.

4. A block for sixty idiot and imbecile children, with rooms for fifteen quiet female patients, who assist in nursing the children.

This makes up the 1,115 we are now building for. The remaining 160 patients to complete the ultimate number will be provided for in further blocks attached to the main asylum or in more villas, whichever is found in experience to be more desirable.

In addition to these buildings are the chapel, the superintendent's and steward's houses, a small isolation hospital for infectious diseases, a lodge, and a number of cottages for married attendants and artisans. The workshops, laundry buildings, recreation hall, also the boiler and engineering houses, are all attached to the main asylum, where are also the principal kitchens and stores. It will be noted that a tramway line from the railway station is laid right up to and into the main asylum, so that coals and stores can be conveyed from the railway into the building without being unloaded from the main-line trucks.

But to return to our asylum—which we have decided shall include an acute hospital—we will first consider the design of this, the most important building in the whole scheme. Here it is that every patient—unless known to be hopelessly incurable—is admitted, and during his stay in this hospital his future life is probably determined, whether he shall recover and go back into the world, or whether he shall pass on to the main asylum for the remainder of his days, to eke out an unhappy existence at a cost of more than £30 a year to his county. On every ground, therefore, we cannot afford to neglect anything—consideration, care, or money—necessary to produce a building which affords the doctors the best opportunities for treating and curing their patients; and any money thus spent will prove the truest economy in the end.

The hospital may be two stories high generally, and must have its own kitchen, where special diets can be prepared; also other necessary offices; but no workshops, laundry, or engineering shops. It should also have a small recreation room where patients can meet for entertainment, though many will often be allowed to join in the entertainments at the large recreation hall in the main asylum. There must be a small official block with offices for the resident doctor and others of the staff, and proper rooms for examination of the patients on their admission, with bath and dressing rooms attached. The remainder of the building will be devoted entirely to the use of the patients.

The rooms must be of various forms and sizes, with ample means of segregation. There should be much scope for classification, but not quite on the same lines as in the main asylum. A ward which can be subdivided for the acutely maniacal, and a ward for the quiet and melancholic, also a ward for convalescents, are necessary; and, above all things, plenty of single bedrooms, and two or three private sitting-rooms where single patients can be treated separately. The dispositions of the various rooms must be left to the architect, but let them be as bright and cheerful as possible, and very homelike in character: few locked doors and no barred windows or anything to suggest imprisonment. The attendants, who in the hospital should be in greater proportion to the patients than in the main asylum, must be the locks and bars by their unremitting care and attention.

The next matter to determine is, How shall the remaining patients be housed? Some think that all lunatics can be best treated in separate houses or villas, as in the colony at Alt Scherbitz; and the Edinburgh District Asylums Board, after visiting a number of asylums both at home and abroad, have adopted a design by Mr. Hippolyte Blanc (a little tracing of which I exhibit) for a new asylum near Edinburgh for 1,000 patients, housed in thirty-three villas, which, together with other buildings, are dotted about like villa residences on a suburban estate.

It will be interesting to learn how this asylum can be successfully worked in a climate

like Scotland, where all the food supply and administration have to be carried out from one centre and over several hundred yards of roads. My own opinion is that a certain number of villas can be usefully filled by convalescents or quiet chronic patients who work on the land or in the laundry. These may be made self-contained, each with its own kitchen, where, on the women's side, the patients can assist. On the men's side the wife of the farm foreman or gardener in charge of the house can do the cooking.

At Hellingly we have started with four villas as a tentative step—two for each sex—one of each having a kitchen for all food service, the other with a smaller one for only breakfasts and teas, as the dinners will be served from the general kitchen, or the villa patients will dine in the main building. In the few asylums where villas have been added to existing accommodation they are much appreciated by the patients on account of their homeliness, and possibly also for the greater freedom allowed. In one of the women's villas at Hellingly a large workroom is attached for sewing and machine work. It is also very desirable to provide separate accommodation for idiot or imbecile children.

In the first erections for 800 patients we will start with, say, four villas, two for each sex, holding thirty patients each, and these, with the acute hospital, will provide for 200 out of our 800, or ultimate 1,200. For the remaining 600 I should say, Build one main asylum, providing for its possible extension up to 1,000, or something less if more villas are found in experience to be better; but, under any circumstances, the administrative department, kitchens, laundry, workshops, and recreation hall must be erected in the first instance sufficiently large for the ultimate number of patients. This will undoubtedly add to the cost, but will save the greater eventual cost of enlargement, to say nothing of the disturbance to the working of the asylum. When plans are submitted for the enlargement of an old asylum, one of the greatest difficulties is to find space and means of increasing the central offices to bear adequate proportion to the extended wards.

The Lunacy Commissioners, in their instructions to architects, direct that certain classes of patients shall be provided for in certain proportions—that is to say, for the sick, the feeble or infirm, the recently admitted, the acute and refractory, epileptics, and quiet chronic and working patients, with variations for sex, females being usually more numerous; but in our model asylum we must remember that we have already disposed of, in the hospital, all our recent cases, which include a certain number of sick and acute, and in the four villas of 120 of our quiet chronic and working patients; we have therefore to provide for sick and infirm, chronic acute, refractory, and epileptics in our main asylum.

The rule is that 25 per cent. of the whole number shall be for sick and infirm cases, and this in 1,200 gives us 300, and with 20 per cent. of recent and acute, and 15 per cent. of epileptics, we have 420 more; and, after deducting the 80 in the hospital, we have left a net total of 640 for our main asylum, being very near the figure we started with. We must of course leave room for future blocks or villas of simple type for 400 quiet chronic and working patients to bring up our complement to 1,200.

I do not propose to take you through all the stages of asylum construction; the Commissioners' instructions give all information as to areas and cubic space necessary for each class of patient, and it will be sufficient to say a word or two as to the type of ward. Generally in asylums the sick and infirm are classed together. I think it better to break up these wards and provide a hospital ward for the actually sick, and other wards for the feeble and infirm. At Hellingly the committee's idea is to nurse all the sick and infirm patients by female nurses as far as possible, and, to make this feasible, the infirmaries on both sides adjoin one another, but are divided into wards so arranged that it is possible to put all eight wards, or any less number, under the charge of the female nursing staff.

In the plan for the new Worcestershire County Asylum [exhibited] I have designed on both sides a small hospital ward on each floor, with a larger ward for feeble or infirm patients adjoining it; thus the actually sick can be kept entirely by themselves and nursed in a small associated dormitory, as in a general hospital, or in separate single rooms.

The infirmary wards should come nearest to the administrative centre, as these patients require the most attention from both doctors and staff, and will generally take all their meals in their own wards. Next to these wards should come either those for the acute and refractory or the epileptics. The recent acute cases will all be in the acute hospital; but where there is no detached hospital a small separate ward should be provided for recent cases. In our hypothetical asylum we have only to provide for the actively suicidal or maniacal and noisy or refractory cases, and in these wards there should be plenty of separate single rooms—the Commissioners say a third of the whole number—and there should also be several day-rooms, allowing for the separation of the patients. At Hellingly, as you will see, there are three day-rooms together, separated only by glazed partitions, which allow of better supervision. The dormitories should not be large, except in the case of one to be used as an observation dormitory for suicidal or troublesome patients, where a night attendant is always in charge.

The epileptic wards should, if possible, be on the ground floor, as at Bexley, where quiet chronic patients occupy the floors above. These patients are subject to fits, sometimes very frequently, and the consequences might be serious if a patient were seized with a fit going up or down stairs. For the same reason the day-rooms should be plain and square, without nooks or corners, and the dormitories should be square and roomy and easy of observation, as here, again, the attendant sits up all night. A few single rooms for special cases should open out of the dormitory, with glass and open panels in the doors.

Lastly, the wards for chronic quiet or working patients, which, for economic reasons, may be of the simplest type, but as homelike as possible, and not extravagant in construction or detail. These wards are intended for the wreckage of the insane population whose chance of recovery is very remote, if not hopeless, and the comfort and safety of the patients are all that need be aimed at. No segregation or special treatment can relieve them; and yet, for humanity's sake, their lot should be made as easy as possible by building and furnishing their wards in a homelike way and allowing them a maximum of liberty compatible with safety.

Every ward in the building should have its sanitary annexe approached by a cross-ventilated corridor, and containing w.c.'s in proportion to the number of patients, slop, brush, and soiled-linen rooms, also lavatories, and at least one bath for emergencies, or in the infirmary wards for regular use—a general bath-house with dressing-rooms being necessary in all asylums; also in each ward a scullery with a small cooking range, a larder, a ward store-room, and a room for hats and boots near to the outer entrance; also rooms for one or two attendants (in larger wards more), one being attached to and overlooking each dormitory. The remainder of the attendants should be housed in a separate block, having a cheerful outlook and as far as possible from the scene of their daily labours. Here there should be sitting or recreation rooms on the ground floor, with separate bedrooms above, one for each nurse or attendant who can be spared from the wards. If the block is near enough to the administrative centre, their dining or mess room may be in it, otherwise it must be near the general kitchen.

It is scarcely necessary for me to enter into the details of the administrative departments. It is obvious that in these must be the kitchens, general store-rooms, workshops, and laundry buildings, all in proper proportion to the asylum; also a recreation hall, where in many asylums the patients all dine together, as some doctors think to their advantage; but this is one of the points on which doctors differ. The Commissioners, who see the working of all asylums, regard

with favour the system of associated dining, and, while they cannot insist on its being adopted in all asylums, require that the dining or recreation hall shall be near the kitchen, with easy means of service from one to the other. Our entrance and official block, where are the committee-rooms and offices, should be on the north side, for reasons already explained: and on the upper floor may be reserved rooms for some of the assistant medical officers, provided that one doctor at least should reside near the patients' wards, and for this reason a block for all the assistant medical officers is often located on the south side, between the male and female infirmary wards.

The chapel, as before explained, must be a detached building, and the superintendent's house now may, and should, be as far removed from the asylum as possible, consistent with the fact of his being frequently wanted there. If he is a married man it is very undesirable that his family should be brought up in close association with the asylum, and in these days of telephones a detached residence may be erected quite away from the asylum, as at East Sussex, where the house is on high ground north of the approach road, and will have a private garden fenced off from the rest of the asylum grounds.

If time allowed I should like to say something of the engineering works and internal fittings of the asylum, on which much of the success in the working of these buildings depends. The heating and ventilation, hot water-service, cold-water supply, and pumping works, lighting, and fitting up of the building with laundry machinery, cooking plant, bells, telephones, fire alarms, and tell-tale clocks would form subject-matter for a paper in themselves. The tell-tale clock is used as a check against the peripatetic night attendant, who, as he makes his rounds, has to mark his progress through each ward or room by inserting a key into the station-box, and this by electric contact marks the hour and station on the drum of the clock in the medical superintendent's office. In the morning the paper is removed from the clock-drum, and shows a complete record of the attendant's journeyings throughout the night.

In my asylums I generate heat and power for all purposes at one central station—indeed, in several old asylums, where I have had to rearrange the engineering works, I have done away with half-a-dozen or more different stoking points and brought all to one centre, where boilers are provided for all purposes, comprising heating, hot-water supply, cooking, laundry work, pumping, and electric lighting. The supervision and stoking, as well as fuel, are thus materially economised.

The boilers may be worked at a pressure varying from 80 to 120 lb. to the square inch, quite sufficient for the simple form of engines used in asylum lighting. For heating the buildings I use low-pressure steam, reducing it at its entrance to each ward to about 5 lb. by reducing valves. If the exhaust steam from the engines is utilised in the heating system, the pressure must be reduced at the boiler-house.

We are beginning to learn from our transatlantic cousins that we *can* utilise our exhaust steam in this way with economy; but when I first attempted it eight or ten years ago it was not without considerable opposition from engineers, who feared the back pressure on the engines. If it cannot be used in heating the building it can always be utilised in heating bath water—anything rather than the extravagant waste of several thousand pounds of steam discharged hourly into the atmosphere.

I am afraid I cannot now discuss the merits of the various systems of heating—hot-water, steam, plenum, &c.—but having tried most of them I am still of opinion that when the conditions are favourable and the soil a dry one, holding no water, the plenum has advantages over other systems, particularly in the absence of steam pipes and radiators in the wards, which are always liable to leakage and at all times require attention and repair, involving the presence of workmen in the wards, which, particularly on the women's side, is very objection-

able. As a general rule where power is required at a distance from the boiler-house, such as for driving machinery in the laundry or fans in the kitchen, electricity may be used, but in the case of pumping water, where power is required regularly for eight or nine hours a day, it is better to sink the well near to the engine-house and use steam engines. The engineer will generally be in or near the engine or boiler-house, and can keep an eye on the pumping engines. Moreover, it is not always desirable to run the dynamos all day for generating electricity to work motors, nor to take heavy currents off the batteries, unless the latter are exceptionally large, and consequently very costly. The bells, telephones, and tell-tales are generally worked from their separate batteries, and call for no comment, but these fittings at a modern asylum are often very extensive. At one of my recent asylums there are sixty-two telephone sets, in addition to the central exchange, and sixty-four stations for "tell-tale" clocks, besides 140 points at which an alarm for fire can be given.

I must not, I assume, conclude without saying a word about the cost of asylums, but in talking to architects I can imagine their suggesting that this is "quite unnecessary." When speaking of the "cost per bed" of asylums there is much confusion, inasmuch as everything depends on what is included in the cost. Some people include the cost of the site as well as the buildings, some add the cost of planting and laying out the ground, while many take site, grounds, buildings, fittings, furniture, implements—in fact, everything, and even add a first suit of clothes for the patients.

Speaking as an architect, I always decline to include in my estimates the cost of any work for which I am not responsible, and limit them to the buildings, engineering works, my own commission, and sometimes, if so instructed, the roads on the estate; and on this basis I contend that a well-built asylum, designed on liberal principles and fitted with all modern appliances, cannot be erected for much less than £300 a bed. The two last estimates I made work out each at £290 a bed for the asylum when completed, but more in the first instance, when the patients' accommodation is considerably less than the administrative buildings will allow for. Twenty-five years ago Nottingham Borough Asylum cost £170 a bed, or little more than half what it would cost to-day. Claybury cost £227 a bed for the number for which it was built, viz. 2,050, but only £188 if calculated on the number of patients now housed there. But that the increased cost is not out of proportion to that of other building works is shown in the Report of the Metropolitan Commissioners, before referred to, where the cost of fifteen asylums erected before the year 1845 is given, and including land and furniture, some of them even then approached £300 a bed and showed an average on the whole number of £200 a bed.

Dr. Conolly gives the cost of twenty-two asylums—including eight in Ireland and Scotland—which were erected before the publication of his book in 1847, of which the average cost of the buildings and furnishing, without the land, was £154 a bed. He goes on to add that "this is probably more than will be found necessary in most future asylums," and I think I may say half a century later that the increase of less than a hundred per cent. in the cost is no more than normal.

In concluding my reference to the cost of asylums I would express an earnest hope that, large as this outlay undoubtedly is, our asylum authorities will see the wisdom of allowing it in all cases where a judicious expenditure will assist in checking the growth of this terrible malady.

DISCUSSION OF MR. HINE'S PAPER.

Mr. E. A. Gruning, *Vice-President*, in the Chair.

Mr. EDWARD MARRIOTT COOKE, M.B., one of His Majesty's Commissioners in Lunacy, who rose at the invitation of the Chairman, proposed a very cordial vote of thanks to Mr. Hine for his learned and valuable Paper. He also desired to tender his thanks to the Council for their hospitality that evening, and for giving him the opportunity of hearing Mr. Hine's most interesting lecture. He assured the Meeting that it was with very great regret that the other members of the Lunacy Board were prevented by circumstances beyond their control from availing themselves of the kind invitation they had received to be present at the Meeting. No one who had watched, as he had done for the last thirty years, the evolution of our public asylums, could fail to appreciate how much the public were indebted to the architectural profession, and in particular to the author of the Paper read that evening, for the present excellence of the accommodation provided for the insane poor. It had sometimes been said that the Commissioners and others connected with asylums had been working too much in a groove; that in the matter of planning and construction of their asylums they were behind other countries, notably Germany; and especially they were criticised for their slowness to adopt the cottage style of building in lieu of the usual institutional type. But he ventured to think that they had been wise in hesitating to adopt too hurriedly any great change in the principles of asylum construction. It must be borne in mind that many of the so-called lunatics in German asylums—and he had noted it from personal observation—were cases of so mild a type that in this country they would not be considered suitable cases for asylum treatment, but would be dealt with in workhouses or would remain in their own homes. It followed, therefore, that what had been found to answer in an asylum like Alt Scherbitz, where the colony or cottage system was largely in vogue, would not necessarily answer in this country. He favoured having in all asylums of any size a separate detached building, or hospital as Mr. Hine described it, for the segregation and special treatment of all recent cases which presented any prospect of cure; but he did not by any means agree with the idea of locating in scattered villas all, or nearly all, the chronic cases of an asylum. Such a plan he was convinced must add to the difficulties of administration and supervision, and tend largely to increase the cost of maintenance. There were, no doubt, in every asylum a certain number of well-behaved chronic lunatics, though he should say certainly not more than ten per cent., whose lives could be rendered happier by residence in buildings more approaching their own homes, and for them detached cottages might be built; but he was of opinion that the great bulk of the chronic cases should continue to be treated in a large main building. One of the greatest steps in the advance of modern construction had been the splitting up of the acute wards, in which the noisy violent cases were located, as in the case of the Hellingly Asylum, where the acute ward had been very wisely divided into three small rooms, so that the number of patients in each must be comparatively small. Such a system must tend to reduce excitement and prevent difficulty among the patients. He should like to suggest their spending a little more attention upon the single rooms; in many of the old asylums such rooms were badly ventilated, badly lighted, and badly warmed. The single rooms were of course occupied by the noisy violent patients, who were very degraded in their habits, and it was most essential that there should be no corner, no cracks, and no flues where any filth could lodge. Mr. Hine had indicated a preference for the plenum system of heating wherever it could be adopted. His own experience inclined him to favour steam coils, and, wherever it was possible, to abolish flues in asylum construction. Many of the patients had very disagreeable habits, and, although architects might do their best to place these flues in such positions that they could be cleaned out, as a matter of fact they were not cleaned out, and sooner or later they became receptacles for dust, dirt, and rubbish. Another point he thought hardly enough attention was paid to—viz., the size of the airing courts. He knew of more than one instance where the design of the asylum was very good, but it had been built in such a position that the airing courts were terribly cramped, and when the patients were turned out of doors they were all huddled together. Again, the aspect of the airing courts, as a rule, was very bad—and not only that, but, instead of giving them as little as possible of a prison-like aspect, they were surrounded by most objectionable high fences, composed of massive iron railings, in some instances as much as 7 feet 6 inches high. In some of the earlier asylums much more attention was paid to the airing courts, and years ago it was usually the rule for the boundary fence to be walls sunk in ha-has,

and he thought there could be no better plan. In a Paper like Mr. Hine's, where there was such a vast amount of interest collected, it was impossible to criticise every point; but he was sure that no one could have heard it without having learned a good deal, and they were all much indebted to Mr. Hine for the great pains he must have taken in preparing it.

DR. URQUHART (Perth) said he had very much pleasure in seconding the vote of thanks. The doctors who practised in these asylums had a very warm regard for Mr. Hine, and held him in high honour. Mr. Hine had been for some time an honorary member of the Medico-Psychological Association, and was associated with many of its members in his ideas, and in leading the way in this branch of architectural work. The Medico-Psychological Association granted its honorary membership for good work done for the benefit of the insane, and members of the Association, in putting Mr. Hine's name forward, felt that there was nobody in this country who was more worthy of that honour than he was. Mr. Hine in his Paper had been extremely modest about his own work, and had not said the things that those who knew the value of his work would desire to say about him. In particular, an instance occurred to him in connection with the great Claybury Asylum. When that site was fixed upon, it was an extremely difficult site, and the architects who entered into the competition viewed it with a considerable amount of dismay. The hole at the top of the hill was some 30 feet deep, and it required a great deal of consideration and a good deal of time before the problem was solved by the cutting of the Gordian knot which Mr. Hine described in his Paper. It seemed a very simple thing to cut off the top of the hill, and fill up the hole, but it did not occur even to Mr. Hine till after a good many weeks of study on that occasion. But even Claybury now was getting old-fashioned. They had gone from the West Riding, the Wakefield Asylum, which was extremely interesting to all architects as one of the very earliest of the planned asylums—planned by the architect in conjunction with a man who had practical experience of the insane, viz. the late Samuel Tuke, of the Yorkshire Retreat. This asylum had become the model of many asylums in this country. It was at the time a very great advance upon what England had previously known, and although it was faulty in many respects, still it embodied the germ of the notion that Mr. Hine had developed in the East Sussex Asylum; and if any architect was desirous of knowing the best and the latest that had been done with regard to asylum architecture it would be well worth his while to study the details of the East Sussex Asylum. As regards American asylums, perhaps the best was the St. Lawrence State Asylum, which was a collection of small asylums accommodating some 300 or 400 patients each. The cost of the asylum was enormous, and it had not been imitated in America since. In Scotland the process of devolution had gone further: the Edinburgh Parish Asylum was now cast into the melting-pot, the ratepayers were up in arms, and it was hardly known whether these cottages, charming villas, with a village church, a hall, and reading-rooms, and such things, were to come out right side up or not. Further north, in Aberdeen, the Aberdeen Parish Council had, through Mr. Marshall Mackenzie, decided to have their new asylum built entirely on the segregated principle; and one of the questions of considerable moment there was that raised by Mr. Hine as to heating. They had decided to heat all the separate little houses, each apart by itself, by a single stoke-hole. Mr. Hine had told them that he gathered these various stoke-holes together, so far as he could, in the asylums with which he had dealt. It reminded him of a system he had recently heard of as in adoption in a small town called Williamsfort, in Pennsylvania, where practically the whole town was heated by steam from central boilers, and the inhabitants were charged so much upon the rateable value of their houses. When the inhabitants of this town want a bath, or soup, or anything of that sort, they had but to turn on the steam and their wants were immediately supplied! We moved more slowly on this side of the Atlantic, but that no doubt would come, and Mr. Hine having inaugurated it in the asylum world, it would probably spread to the sane population later on.

MR. CLIFFORD SMITH, A.M.I.C.E., said that as Mr. Hine had kindly made reference to engineering skill in connection with asylums, and as it had been his good fortune to be associated with Mr. Hine at Claybury, the Heath, and Horton Asylums, he might perhaps make a few remarks. He would like to say, in connection with the temporary buildings referred to, that he had also had the good fortune to meet Mr. Hine thereon in his capacity as Consulting Architect to the Commissioners of Lunacy. These buildings, he knew, were not altogether beloved of architects, seeing that they were built of galvanised iron. Yet the great feature in constructing temporary buildings was not so much to save money as to get speed of construction. His Committee wished to get buildings rapidly, and the only way that buildings could be got rapidly was to put up those that could be speedily constructed, and done without very special preparation of plans; and as a consequence the ratepayers spent £173,000—at the rate of £100 a bed. Therefore, though they were comparatively costly, yet for the reason that the London County Council wanted them, they were cheaper

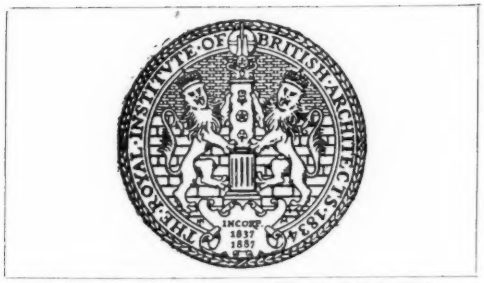
at the time, because they accommodated people who otherwise would have been sent out of London at greater expense, and thus the temporary buildings served their purpose. With regard to the question of asylums, he had frequent occasion to visit one of the more ancient asylums belonging to the London County Council—Hanwell to wit, before it was brought up to the modern standard. And he must say that he never went from Hanwell to Claybury in those days without being struck with the charming difference in favour of Claybury. The difference was so very marked and the advantage so very patent that nobody with a trained eye, or even without a trained eye, could fail to appreciate the improvement that had taken place during the period that had elapsed from the time the Hanwell asylum was built, 1831, till the building of Claybury in 1887. The difference was most marked, and the advantages to the people were as great. Again, an asylum well designed was more cheaply maintained; heating, electric lighting, cooking, laundry-work, hot-water service—all these points represented hard cash, and he was bound to say that Mr. Hine had given them in these respects the greatest advantage that they could get in their modern asylums in comparison with the ancient ones. With a central boiler-house, and the whole arrangements radiating therefrom, they got the maximum result with a reduction in expenditure for working. With an asylum accommodating 2,000 patients they had to write off one and a half to two tons of coal per patient per annum, and it would be seen at once that if they could by any possibility increase the production from a pound of coal when the coal bill reached perhaps 4,000 tons a year—if they could get another half-pound of water raised per pound of coal—there must be a gain; and at Claybury they had all these benefits, and they would show a further improvement at the Heath Asylum. Mr. Hine, however, had rather surprised him when he stated just now that while he advocated the use of a central boiler-house, and the utilisation of exhaust steam, yet at the same time he did not think electricity should be used for driving the deep-well pumping machinery. He thought Mr. Hine had concealed that secret very well. He had heard it to-night for the first time. It showed how considerate he was to those who were called upon to work with him, when he had allowed him (the speaker) to have his own way at the Heath Asylum in that particular respect. It was probable, however, that they would be able to make a comparison between the arrangement Mr. Hine proposed to adopt in his new asylum and the arrangement they had adopted at the Heath Asylum. With regard to heating, Mr. Hine advocated the plenum system where suitable, and Dr. Marriott Cooke spoke of steam heating without flues. His experience was—and he had to deal with seven of the London Council Asylums, where they had installed almost every type of heating—high-pressure water, low-pressure water, the plenum system, the semi-plenum system, low-pressure steam, and medium-pressure steam—that the low-pressure steam arrangement, with radiators having fresh-air inlets from the outer walls led direct to them, and with proper outlets for vitiated air provided, gave the best results, the condition being always established that too high a pressure of steam is not maintained in the radiators, to "burn the air," if he might use that expression. He found that if they did not exceed 205 degrees in these radiators they got very satisfactory results, provided there was a proper fresh-air inlet to each. He was very glad to have had the opportunity of speaking on the subject.

MR. GORDON SMITH [*F.*], who was called on by the Chairman, said he could not profess to special knowledge of asylum planning. Looking at some of the plans exhibited they suggested almost a grotesque idea of planning. He felt particularly puzzled about the question of aspect. What appeared right on one side for aspect must be, as it seemed to him, more or less wrong on the other. [The speaker indicated various aspects on the same set of plans to explain his criticism.] Another point that surprised him was the construction of the broad wards for four rows of beds shown on the plans of a brand-new asylum. That form of ward had been absolutely condemned as far back as 1867 by the Select Committee appointed to consider the question of cubic space in Metropolitan Workhouses. Their conclusions were published in a Blue Book known as the "Cubic Space Report." The Local Government Board had for some years refused to sanction such wards in Poor Law buildings; and yet in asylums these wards were now being built with the assent of another Department of Government! Again, he did not understand why the isolation hospital of a lunatic asylum should be different in principle from that of an ordinary village community or town. On some of the plans there seemed to be no arrangement for isolating one infectious disease from another. Doubtless it was not so necessary in a lunatic asylum where the officials had absolute control over all the inmates, and there was little chance of their contracting infectious diseases; but the arrangement was very different from that advocated in the Local Government Board Memorandum on isolation hospitals.

MR. HINE, having responded to the vote of thanks, replied on some of the points raised during the discussion. He quite agreed with Dr. Cooke's suggestion that more attention should be given to single rooms; but when it was considered that a fourth or a fifth of the whole number of patients in an asylum occupied single rooms, it

would be seen that great increase in the space must be required, and the difficulty of planning would be greater, as would also be the cost of the single rooms when enlarged. Architects who knew the great cost of building asylums shrank from adding largely to the expenditure, as they would do if they increased the size of so many rooms. With regard to the statement that he was in favour of the plenum system of heating, he was afraid the words he used were a little misleading. He said that there were advantages in the plenum system over others, and he thought there were; but there were also great disadvantages. If they could get the plenum system without its disadvantages, he should say it would be quite an ideal system! Perhaps he might refute the suggestion best by stating that he had designed eight asylums since the one referred to, and in not one of these had he adopted the plenum system of warming. With regard to the question of aspect referred to by Mr. Gordon Smith, he should be glad if Mr. Smith would suggest how they could get a perfect aspect to every ward. No doubt, if the asylum could be extended all over the country a perfect aspect might be secured. But it must be remembered that each block must be brought within reasonable distance of the administrative centre, and one could only give the best aspect possible under the circumstances. As a rule, the best aspect is given to the day-rooms of the patients. Mr. Gordon Smith had also called attention to the dormitories with three or four rows of beds. In hospital wards and wards where patients were in bed in the daytime, it was never usual to construct them with more than a double row of beds. In wards which required supervision at night it was necessary to arrange the beds for a large number of patients within hearing and sight of the attendant, and it was sometimes necessary, particularly in epileptic wards, to have three and sometimes four rows of beds in a dormitory, to secure proper supervision. Mr. Gordon Smith, in his remarks about the isolation hospital, must have been confusing the acute hospital with the isolation hospital. He had not shown a plan of an isolation hospital, but each asylum had a small hospital for infectious diseases, where such cases could be isolated. They were constructed very much on the lines of the Local Government Board's isolation hospitals.

*** Mr. Hine's Paper was read to the Meetingby Dr. Hayes Newington, whose services in connection with the planning of the new East Sussex Asylum at Hellingly are referred to on page 175. At the close of the Meeting the Chairman expressed the members' appreciation of the trouble Dr. Newington had taken on their behalf, and of his admirable delivery of the Paper, and having moved a Vote of Thanks to him, the motion was agreed to by acclamation.



9, Conduit Street, London, W., 23*rd Feb.* 1901.

CHRONICLE.

Her late Majesty Queen Victoria.

There was a good attendance of members and visitors at last Monday's meeting, which was the first held since the death of her late Majesty. Among the visitors were members of the medical profession, specialists in lunacy cases, and consequently interested in the subject brought forward by Mr. Hine. In the absence of the President, who was suffering from temporary indisposition, the Chair was taken by Mr. E. A. Gruning, *Vice-President*. Part of the business on the agenda, that relating to the election of members, belonged to the meeting originally arranged for the 4th inst., but postponed on account of the national bereavement. The proceedings opened with an Address to Members from the President, which the Secretary stated he had been officially commissioned to read personally to the Meeting. The Address, which was received in respectful silence, the whole audience standing, was as follows :

Gentlemen,—I must ask you all to rise for a moment as a tribute of respect to our late great Queen. Since last we met together here, a most solemn and soul-stirring incident has occurred. The Empire has sustained an incomparable loss. The Victorian era, a most memorable epoch, has passed. The British Empire and the world in general, wherever civilisation exists, is mourning the death of our late Sovereign. Europe, Asia, Africa, America, and Australia have been deeply touched, and have all given kindly expression to their profound sympathy with us. It is not only the loss of a great ruler that is mourned, but also the loss of an inexpressible influence, of a good, religious, wise, and gracious lady, and of a sympathetic woman. Who can have read without having been deeply touched her oft-repeated solicitude for those in distress, whether her soldiers, sailors, or others of her subjects? Our late Queen's influence must necessarily have been greater than that of any previous monarch in the world's history. For Queen Victoria's Empire has been the only one in which influence, whether for good or evil, could have been felt over an extent of territory so great that on it the sun never sets. But we as Members of this Institute have even a closer tie, a deeper cause for mourning. Her late Majesty was not only our beloved Queen, but also our most gracious, beneficent Patron. Her kindly interest in us commenced with the action of her Royal Consort in our early days, and has been evinced from time to time during the whole of her long and glorious reign. Those who have had the honour of receiving from this Institute the Queen's Gold Medal for Architecture will cherish no possession more highly. It is a memento of the greatest Queen the world has seen, and also of the kindly encouragement her late Majesty so beneficently extended to influence for good our art of Architecture. Her reign has been the most memorable in the annals of this country for the marvellous increase of her Empire, and its unrivalled prosperity, as well as for the unprecedented advancement in learning, science, and art. I feel sure there is not one amongst us who not only deeply sorrows, but who must also feel a loneliness at heart at the loss of our late beloved Sovereign Queen Victoria. There is a great blank.

But in our grief we have happiness in welcoming our King's accession. From his known affection and sympathetic understanding of his people, his careful attention to his duties, and his gracious promises to follow in the footsteps of his Royal mother, we feel every confidence that he will so wisely rule as to endear himself to his subjects, who will entertain the deepest feelings of loyalty and devotion to His Most Gracious Majesty King Edward the Seventh. God save the King !

As a matter of form I must ask you to ratify the action of your President and Council in sending to His Majesty an Address expressing on behalf of this Institute and its allied Societies the sincere expression of our sorrow and loyalty.

The Secretary then read a copy of the Address, the original of which, engrossed on vellum, was forwarded for presentation to the King a few days ago :—

The Humble and Loyal Address of the Royal Institute of British Architects to His Most Gracious Majesty the King.

May it please Your Majesty,—

We, your dutiful subjects, the President and Council, on behalf of the members of the Royal Institute of British Architects and of the Societies both in the British Islands and the colonies in alliance therewith, beg leave humbly and respectfully to approach your Majesty, and to offer our deep and heartfelt sympathy in the inexpressible loss your Majesty, the members of the Royal Family, and the nation have sustained by the

death of your Royal mother our late Most Gracious Sovereign Queen Victoria of glorious memory. Her late revered Majesty encouraged with her Royal and generous patronage the art that is so dear to us, and we mourn with deepest sorrow, not only, in common with the rest of the British Empire, our beloved ruler, but also the gracious and beneficent patron of the Royal Institute throughout the whole length of her long reign. We most respectfully and dutifully tender to your Majesty our sincere devotion and loyalty on your accession to the Throne, and earnestly pray that the Almighty will grant your Majesty and your Royal Consort Queen Alexandra a long, happy, and glorious reign, during which the nation may prosper, the arts flourish, and your Empire enjoy all the blessings of peace.

On behalf of the Royal Institute,

(Signed) Wm. Emerson, *President.*
Edw. A. Gruning } *Members*
J. M. Brydon } *of Council.*
Alex. Graham, *Hon. Secretary.*
W. J. Locke, *Secretary.*

The following communication has been received from Mr. Edwin T. Hall [*F.*]:—

I recently had the honour to receive letters from Baron Max Ferstel [*Hon.Corr.M.*] of Vienna and M. Poupinel (Principal Secretary Société Centrale des Architectes français) containing such kindly reference to our national mourning that I feel sure my brother architects will be interested in the following extracts:—

Baron von Ferstel writes: "I am performing a sad office in telling you how deeply struck we all are by your great national sorrow. The respectful sympathy my country always had for her late Majesty the Queen makes us feel her death as a loss for the whole world. In my character as Corresponding Member I beg to testify my true and deep sympathy in your and the English nation's sorrow."

M. Poupinel writes: "Is it necessary to tell you that I feel sincerely your loyal sorrow at the loss of her Majesty Queen Victoria? We had, generally, a real sympathy for her character and respected her age. You know the Prince of Wales was very popular in France, so his presence on the Throne can be felt only with favour and sympathy."

I have the full consent of both these gentlemen to the publication of their sentiments, and it gives me great pleasure to make them known. I feel sure we all highly esteem the sympathy of our colleagues abroad.

The Royal Gold Medal.

The next business on the agenda had reference to the Royal Gold Medal. The Chairman stated that under ordinary circumstances this would have been the night on which the choice of the Royal Gold Medallist would have been made known. Under present circumstances it was impossible to move in the matter. The Royal Gold Medal was a personal gift of the late Queen. With the death of our revered Sovereign this gift had ceased, and the time had not arrived, nor would it have been politic, to approach his present Majesty on the subject. Therefore for the present, and for this year, the award of the Gold Medal must remain in abeyance. The continuance of the presentation was a question that entirely depended upon the King's wishes and personal goodwill. The Council intended, at a convenient date, to make application that the award of the Gold Medal shall be continued in future. But the Council were advised, informally and unofficially, that it would be wise to postpone this application for a while; and further, that if the Council stated that in view of the sudden heavy pressure of affairs they did not propose to apply for the Medal for this year's presentation, provided always that such was the King's pleasure, the action of the Council might be appreciated. The Council proposed therefore to adopt the course suggested, and, if the proposal was agreeable to His Majesty, not to nominate a candidate for the year 1901.

London University.

The Board of Studies for "Fine Art (inclusive of Architecture)" has now been formed. It consists of the following members on the teaching staff of the University:—Professor F. Brown (University College), Professor T. Roger Smith (University College), Professor R. Elsey Smith (King's College), Professor E. A. Gardner (University College), Professor W. Flinders Petrie (University College), Professor W. C. Unwin (Central Technical College); also of Sir Edward J. Poynter, P.R.A., and Mr. Arthur Cates. Mr. Cates, who will represent the interests of the Institute on the Board, has been appointed Chairman.

Federation of Australian Architectural Societies.

Recent advices from Melbourne show that the Federation of the Australian Colonies is to be followed by the federation of the various architectural societies scattered throughout the Australian continent. This step has been resolved upon by the Conference of Australian Architects held at Sydney in the first week of the present year. The *Building, Engineering, and Mining Journal* of Melbourne of the 5th ult. gives publicity to the following letter addressed to the Chairman of the Sydney Conference by Mr. George C. Inskip [*F.*], who was lately appointed Hon. Secretary to the R.I.B.A. in Australia:

I have for many years advocated the federation of the Australian Institutes of Architects, and the forming of one Institute with chapters in the various colonies. When

occupying the position of President of the Royal Victorian Institute of Architects, which I have had the honour to do upon three occasions, I made efforts (in 1891–2) to bring about this result, but without success. Now that we are all rejoicing that Federation of the various Australian Colonies has been brought about, it is, I think, a fit time to again bring forward this subject. Australia has now become one nation, and the time has arrived for Australian architects to form an Australian Institute. We in Australia are working under altogether different conditions from architects in the old country, and should therefore not be satisfied with affiliation with the R.I.B.A. We are too far away from the old country to reap any special advantages therefrom, and if affiliated lose our individuality, and to a certain extent our independence, and sink to the level of a small provincial society in England. The forming of an Australian Institute of Architects is a matter that must not be allowed to drop, if we desire to take an independent and leading position amongst the architectural societies of the world. An Australian Institute cannot possibly hope to rival the parent Institute, which will always be looked upon by Englishmen as the acknowledged head of the architectural profession. An Australian Institute should occupy the same position in relation to the parent society that the colonies occupy towards the mother country, independent, but working in harmony with it, for the welfare of the whole profession. I am sorry I am unable to visit Sydney to bring this matter personally before the Conference, and shall therefore be glad if you will kindly do so, and, if possible, get a committee appointed to take into consideration the best means of bringing about the Federation of the various Colonial Institutes. Should the Conference decide to appoint such a committee I shall be pleased (if desired) to act upon it. As Hon. Secretary to the Royal Institute of British Architects in Australia, I would also ask you to be kind enough to draw attention to the fact that the R.I.B.A. Examinations to qualify for Associateship will be held in Sydney in 1901, and in Melbourne in 1902, and to point out to all young architects the advantages to be gained by passing this examination, and that it would give them at once a position in the profession that can be obtained in no other way. The holding in Australia of these examinations must not be looked upon as an attempt by the R.I.B.A. to usurp the functions of an Australian Institute, but simply as offering to colonial architects an opportunity of joining the parent society, which should be eagerly taken advantage of. The passing of this examination by Australian architects should be looked upon in the same light as colonial medical men look upon the taking of an English degree, viz. as an extra qualification giving them a higher status in their profession. In conclusion I may state that I shall follow with much interest the work of the Conference, and trust that it will be the means of bringing about the kindly feeling and unity that should exist between members of the same profession in all parts of Australia.

The sequel shows, as stated above, that the Sydney Conference have decided to form a Federal Institute of Architects as advocated by Mr. Inskip, and it may be confidently anticipated that the union will lead to a considerable accession of strength, and to a marked improvement in the status of the profession in Australia. A proposal to establish a Federal Scholarship for young architectural students has also been approved by the Sydney Conference. It is hoped that means will be forthcoming to make the proposal an accomplished fact. Such a scholarship would prove highly stimulating to the youthful architect, and would not be without beneficial results to the community.

In view of the unique opportunities to be afforded Australian architects in the planning and building of their Federal capital, a magnificent future lies before them. Their efforts on behalf of their art will be watched with keen interest and warmest sympathy by their brethren, not only in the mother country, but in every part of the British dominions.

The Institute of American Architects and Washington Improvements.

Recent discussions concerning the desirability of establishing some sort of official Board of experts, constituted of artists of acknowledged excellence, for whose approval should be submitted the designs for the frontages of buildings proposed to be put up in the chief streets and *places* of our towns and cities, render of interest the efforts being made in a somewhat similar behalf by the Institute of American Architects, for the City of Washington and the District of Columbia. At a recent convention of the American Institute a committee was formed for the purpose of promoting a Bill in Congress for the appointment of a commission "which should procure a general plan for the City of Washington, to determine the location of public buildings, ordering of landscape and statuary, and the extension of the park system in the District of Columbia." The scheme has progressed so far that a Committee of the Senate has reported favourably upon it and recommended the adoption by the Senate of the following resolution:—

> Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the President of the United States be, and he is hereby, authorised to appoint a commission, to consist of two architects and one landscape architect eminent in their professions, who shall consider the subject of the location and grouping of public buildings and monuments to be erected in the District of Columbia, and the development and improvement of the entire park system of said district, and shall report to Congress thereon the first Monday in December, nineteen hundred and one.
>
> That to carry out the provisions of this resolution the sum of ten thousand dollars be, and the same is hereby, appropriated, out of any money in the Treasury not otherwise appropriated, to be expended under the direction of the President.

The Senate Committee, in their Report, point to the remarkable success achieved at the Chicago World's Fair as showing how an artistic plan may be devised and carried out so as to be a source of national pride and a means of national education. What has been achieved temporarily in the midst of commercial cities may be realised permanently in a non-commercial capital city. The Report continues: "Washington has reached that stage in its development when a well-matured scheme of development for its parks and boulevards, the

location of its new public buildings, and the treatment of its bridges and monuments must be adopted. This necessity has found expression . . . . especially in the discussions of the representative association of the architects of the United States. . . . The committee has assurances that the services called for by the resolution would be rendered willingly by men who have attained the highest rank in their professions, and that the President of the United States has but to make the request of the very best of them to receive a quick response dictated by a patriotic desire to place their experience and abilities at the service of the country in beautifying its capital. Experience at Chicago and elsewhere has shown that the best results are attained by a small commission of professional men working together; for the object is to secure expert testimony on a question with which experts alone are competent to deal. The dignity and grandeur of the Capitol, the graceful and satisfactory proportions of the White House, the classic simplicity and lasting beauty of the older public buildings, and the admitted excellencies of the original plan of the city of Washington, all come from the employment of trained men, selected and directed by the President of the United States. It is these precedents that the resolution seeks to follow."

MINUTES. VII.

At the Seventh General Meeting (Business and Ordinary) of the Session 1900–1901, held Monday, 18th February 1901, at 8 p.m., Mr. E. A. Gruning, *Vice-President*, in the Chair, with 32 Fellows (including 15 members of the Council), 43 Associates (including 2 members of the Council), 1 Hon. Associate, and several visitors, the Minutes of the Meeting held 21st January 1901 [p. 136] were taken as read and signed as correct.

The Secretary read an Address from the President to Members in reference to the death of Queen Victoria and the accession of King Edward VII. [p. 185].

The Secretary, further, read the Address of Condolence and Loyalty which the Council on behalf of the Institute had forwarded for presentation to His Majesty the King [p. 186].

The Chairman announced that, subject to the King's pleasure, the Council did not propose to nominate a candidate for the Royal Gold Medal for the current year [p. 186].

The following candidates for membership were elected by show of hands under By-law 9:—

As Fellows (7).

FRANCIS SPENCE BAKER [*A.* 1892] (Toronto).
ARTHUR CONRAN BLOMFIELD, M.A. Cantab.
CHARLES JAMES BLOMFIELD.
GEORGE FREDERICK COLLINSON [*A.* 1892].
WILLIAM FLOCKHART.
JOHN LEEMING.
JOSEPH LEEMING.

As Associates (23).

THEOPHILUS BRADFORD BALL [*Probationer* 1894, *Student* 1897, *Qualified* 1900] (Weston-super-Mare).
ERNEST WILLIAM BANFIELD [*Probationer* 1894, *Student* 1898, *Qualified* 1900].
GEORGE BRUMELL [*Probationer* 1893, *Student* 1896, *Qualified* 1900] (Morpeth).
HENRY MUNRO CAUTLEY [*Probationer* 1893, *Student* 1896, *Qualified* 1900] (Ipswich).
WILLIAM GERALD ST. JOHN COGSWELL [*Qualified* 1900, *Special Examination*] (Chester).
WILLIAM EDWARD BENJAMIN FROOME CROOK [*Qualified* 1900, *Special Examination*].
HENRY ARCHIBALD DOUGLASS [*Probationer* 1892, *Student* 1897, *Qualified* 1900] (Brighton).
THOMAS WALLIS GORDON [*Probationer* 1890, *Student* 1892, *Qualified* 1900] (Nottingham).
ALFRED HAROLD GOSLETT [*Probationer* 1895, *Student* 1897, *Qualified* 1900].
SHIRLEY HARRISON [*Probationer* 1897, *Student* 1898, *Qualified* 1900, *Ashpitel Prizeman*] (Leicester).
CHARLES EDWARD HUTCHINSON [*Qualified* 1900, *Special Examination*].
ALFRED LIGHTLY MACGIBBON [*Probationer* 1895, *Student* 1897, *Qualified* 1900] (Edinburgh).
ROBERT HENRY JEWERS MAYHEW [*Probationer* 1897, *Student* 1898, *Qualified* 1900].
WILLIAM VINCENT MORGAN [*Probationer* 1893, *Student* 1895, *Qualified* 1900] (Carmarthen).
REGINALD WYNN OWEN [*Probationer* 1894, *Student* 1896, *Qualified* 1900] (Liverpool).
ALFRED WYATT PAPWORTH [*Probationer* 1897, *Student* 1898, *Qualified* 1900].
JOHN QUAIL [*Probationer* 1897, *Student* 1898, *Qualified* 1900] (Leamington).
FREDERICK JOHN OSBORNE SMITH [*Probationer* 1893, *Student* 1897, *Qualified* 1900].
EDWIN JAMES TENCH [*Probationer* 1894, *Student* 1896, *Qualified* 1900] (Norwich).
CHRISTOPHER BOSWOOD THOMAS [*Probationer* 1894, *Student* 1896, *Qualified* 1900].
HENRY ARCHIBALD TINKER [*Qualified* 1900, *Special Examination*].
PHILIP JOHN TURNER [*Probationer* 1894, *Student* 1898, *Qualified* 1900] (Stowmarket).
WILLIAM JOHN WALFORD [*Probationer* 1894, *Student* 1898, *Qualified* 1900].

As Hon. Fellow.

Sir LAWRENCE ALMA-TADEMA, R.A., F.S.A. [*H.A.*].

The following candidate, found by the Council to be eligible and qualified for candidature under the Charter and By-laws, was nominated for Fellowship:—Joseph Henry Brewerton (Bournemouth).

The following members attending for the first time since their election were formally admitted and signed the respective registers—viz.: Herbert Hardy Wigglesworth and David Barclay Niven, *Fellows*; Ernest William Banfield, John Stanley Heath, Alfred Wyatt Papworth, James Edward Coleman Shield, and William John Walford, *Associates*.

A Paper on Asylums and Asylum Planning, by Mr. George T. Hine [*F.*], having been read for the author by Dr. Hayes Newington, and illustrated by numerous plans exhibited by Mr. Hine, a discussion ensued, and votes of thanks were passed by acclamation to the author and reader respectively of the Paper.

The proceedings then closed, and the Meeting separated at 10.30 p.m.

THE HIGHER EDUCATION OF ARCHITECTS.

By Arthur Cates [*F.*].

V. L'ÉCOLE NATIONALE ET SPÉCIALE DES BEAUX-ARTS, PARIS. SECTION D'ARCHITECTURE.

THE great academic system to which France is so deeply indebted for the foremost position which she has for nearly four centuries taken in Literature, Science, and Art, was inaugurated in the reign of Louis XIII. The "French Academy" was instituted in 1635 under Cardinal Richelieu. The "Academy of Painting and Sculpture" in 1648, in the Regency under Cardinal Mazarin. The "Academy of France" at Rome was founded in 1666 by Louis XIV., on the advice of Colbert, and first housed in the Palazzo Capranica, was removed about 1736 to the Palazzo Mancini, and was, in 1803, finally settled in the Villa Médicis. In 1671 the same monarch, influenced by his enlightened Minister, established the "Academy of Architecture," which was reorganised in 1775.

At the Revolution these Royal Academies were suppressed by a decree of the National Convention of 8th August 1793, but in 1795 the National Institute of Science and Art was founded by a decree of the Republic, and the *Ecole des Arts* for painting and sculpture was established; but in 1816 Louis XVIII. re-established these bodies, and after various changes the *Institut de France* now consists of five bodies, viz. the *Académie Française*, the *Académie des Inscriptions et Belles-Lettres*, the *Académie des Sciences*, the *Académie des Beaux-Arts*, and the *Académie des Sciences Morales et Politiques*.

On the suppression of the Academy of Architecture in 1793, individual efforts were made to establish a school—an "atelier" was conducted by David Le Roy, A. L. T. Vaudoyer, and P. L. Baltard, by whom the tradition of the Academy was kept alive between 1793 and 1816. The *École d'Architecture* was established on the ground floor of the Institut, and, combined with the *Ecole des Arts* for painting and sculpture, formed the *Ecole des Beaux-Arts*.

In 1608, Marguérite de Valois, first queen of Henri IV., La Reine Margot of the *Heptameron* and the *Mémoires*, as a pious act towards the close of her gay and chequered life, founded, in the gardens of the palace she had recently built in the Rue de Seine, the *Couvent des Petits Augustins*, of which the chapel still exists, appropriated as the Renaissance Museum of the École, while the sacristy is devoted to the glory of Michael Angelo. On the suppression of the monastic orders and religious houses, the National Assembly, in 1790, appropriated the ancient *Couvent des Petits Augustins* to receive the monuments and objects of art collected by Alexandre Lenoir (1762–1839) from churches and religious houses, and saved by his care from destruction by the iconoclastic fury which then raged against all things connected with the Church and nobility; the collection thus formed became the celebrated *Musée des Monuments Français*.*

At the Restoration, Louis XVIII., on 24th April 1816, decreed that the monuments collected by Alexandre Lenoir should be returned to the churches and edifices whence they had been taken, and on 18th December the buildings which had been occupied by the museum of Lenoir were appropriated to the *Ecole Royale et spéciale des Beaux-Arts*.

The designs for the new buildings for the École were entrusted to François Debret (1783–1850); the first stone was laid 3rd May 1820. In 1834 Debret was replaced by his brother-in-law and former pupil, Felix L. J. Duban (1797–1870), who had been an inspector of the works under him. Duban remodelled the whole scheme, which had not far advanced, and was actually the architect of the Palais des Beaux-Arts as it now stands, from the entrance in the Rue Bonaparte where the colossal busts of Poussin and Puget guard the portal, to the elegant and dignified façade on the Quai Malaquais, which added charm to that quarter of the city, and was completed in 1862.†

The École des Beaux-Arts lodged in this splendid building is supported by the Government,‡ and the instruction given to those so fortunate as to obtain admission is entirely gratuitous. The limit of age is between fifteen and thirty, and besides French subjects a restricted number of foreigners are admitted to the school: among them students come from England, America, Italy, Switzerland, Belgium, Austria, Roumania, and even Persia.

The Administrative Staff of the École, under a director appointed for five years by the President of the Republic, consists of a secretary, an inspector, a keeper and assistant-keeper of

* Lenoir, Alexandre: *Notice Historique des Monuments des Arts réunis au dépôt national*, Paris, 1793; *Musée des Monuments Français*, Paris, 1804.

† Daly, César: *Funerailles de Félix Duban. Discours prononcés sur sa tombe.* 8o. Paris, 1871.—Beulé, E.: *Eloge de Félix Duban. Notice sur sa vie et ses ouvrages. Académie des Beaux-Arts*, 9 novembre 1872; *Revue Générale de l'Architecture*, vol. xxix., 1872, pp. 206–217.

‡ The Budget for the current year is 420,260 francs, say £16,900, and 100,000 francs, £4,000, towards providing additional accommodation.

the library records museum and collections, a librarian and two sub-librarians, with thirty-nine clerks, officials, and attendants.

The Teaching Staff consists of twenty-eight professors for the École, and eleven professors for the ateliers, and is under the superior Council of the École, formed of twenty members, viz.: The Director of Beaux-Arts, the Director and Secretary of the École, two painters, sculptors, and architects, one engraver, and five other persons—these twelve members being selected outside the École, and appointed by the Minister of Fine Arts; also five selected Professors of the École—viz. of painting, sculpture, architecture, science, and history.

The Juries for painting, sculpture, and architecture consist of thirty members each, the permanent members being the member of the corresponding section of the Académie des Beaux-Arts of the Institut de France, the professors of the École and artists recognised by the Council as teachers. The permanent members must not exceed two-thirds of the total number.

Admission to the École is only obtained by success in competition at the half-yearly Entrance Examinations.

For the admission of Painters the tests are—first, a drawing from the antique, or from life, in twelve hours. Those who pass this test satisfactorily proceed to the further examination; these may number 80 of the candidates, with at the most 40 supplementary (foreigners) who have to execute —1. An anatomical (osteological) drawing "en loge" in two hours. 2. A perspective drawing in four hours. 3. Modelling a fragment of a figure from the antique in nine hours. 4. An elementary study of architecture "en loge" in six hours. 5. An oral or written examination on general history.

For Sculptors, the preliminary test is a figure modelled after the antique, or from life, in twelve hours. The further examination of the 27 candidates selected, with 15 supplementary (foreigners), is—1. An anatomical (osteological) drawing "en loge" in two hours. 2. A drawing of a fragment of a figure in nine hours. 3. An elementary study of architecture "en loge" in six hours. 4. An oral or written examination in general history.

The Architect, being a student of science, and a constructor, as well as an artist, has to undergo a more severe and comprehensive entrance examination, and a much wider course of instruction than the painter or sculptor. Of the courses of lectures, no fewer than twelve are special to the architect; full details of all are given further on.

At each half-yearly entrance examination for admission to the section of Architecture there may be from 400 to 500 candidates, of whom 60 only are admitted; 15 of them may be foreigners, making 90 French subjects and 30 foreigners admitted yearly to this section—120 in all.

The great prestige of the École, the severity and thoroughness of the entrance examination, and the large number of students who desire admission, has a widespread effect throughout France in creating a high standard of preliminary education in art, and raising the general standard of education.

This is particularly so as regards the architect. The architect "novice" differs much from the painter or sculptor "novice." He is generally older, smarter, and better dressed; older, because the architect, having to submit to serious examinations in mathematics, physics, history, &c., has invariably completed a thorough school education before entering the École, and has generally passed through a preliminary training of one or two years in an external atelier; the whole of the students admitted in 1900 were pupils of one or other of nineteen ateliers, in which the young architect graduates from the "Nouveau" up to the "Diplômé." And he is smarter and better dressed, because his family is generally in easy circumstances, since the desire to become an architect rarely occurs to the son of a village tradesman, while aspiring painter and sculptor novices, led on by the inspiration of colour and form, continually reach the École from remote hamlets, rich only in their devotion to art.

The great principle of the system is that of competition. Progress in the school can only be obtained by success in the competitions, and advancement from the second to the first class is only granted to those who have gained in perhaps three years' continual work, a certain number of marks in defined competitions.

The work for these competitions, except the preliminary sketches of design, which are required to be performed "en loge," may be executed either in one of the three ateliers attached to the Architectural Section of the school, or in an external atelier. Each atelier of the "École" will accommodate fifty students, and admission to it is only gained by the consent of the Professor "Patron" of that atelier who may find of the applicant "dignus est entrare." The student may attach himself to an external atelier,* and in either, having gone through the usual mysteries of initiation, he will be able, on payment of a moderate entrance fee and a modest monthly contribution towards the necessary expenses, to enjoy the advantage of the direction and criticism given by the "Patron," and the advice of the older students; since the actual

* An external atelier may be considered a commonwealth of architectural art, constituted by the aggregation of enthusiastic students, brought together by admiration for the genius or personality of the "Patron," mutual personal friendships, opportunities of vacancies, and other reasons, and forming a self-governing community, under the influence, control, and guidance of the "Patron." The working professional office of the "Patron" is generally quite distinct from the atelier, the students in which, as such, have nothing to do with the preparation of the drawings for his private work.

instruction lies chiefly in the hands of his fellow pupils, many of whom, "Anciens" working up for the Grand Prix or the Diplôme, will be men of comparatively mature age, while the spirit of rivalry existing between the students in the ateliers and between the ateliers themselves, tends to develop and encourage the best elements in the art of design; and in the École itself everything which would encourage the seeking for the beautiful is amassed around the student, and creates with the very air he breathes a noble enthusiasm to excel in his art.

The complete course of the École up to obtaining the Diploma may occupy eight years, but only one student in each year can obtain the Grand Prix de Rome.

The great inducement for skilled and experienced men to continue for the best early years of their lives in academic study, is the hope of attaining the great honour of the Grand Prix de Rome, and certainty of obtaining Government patronage as a reward for their successes. Dispensation from two years' military service, granted to those who gain certain distinctions, is a further encouragement for emulation in study. Yet, even with these substantial inducements to continue their studies to comparatively so late a period of life, no little account must be taken of the natural enthusiasm and devotion to their art, which, combined with the spirit of rivalry, induces those who have attained distinction in the earlier stages to devote themselves to the attempt to gain the highest point, and, failing that, to so distinguish themselves as to secure that official Government patronage only granted to the successful in the struggle.

The Course of Instruction.

The École Nationale et Spéciale des Beaux-Arts gives instruction in the Arts of Drawing, Painting, Sculpture, Architecture, Engraving, Medalling, and Gem Engraving. It comprises:

1. Courses of lectures on the different branches of art.
2. The "École" proper, in which, after admission by competition in an Entrance Examination, the student can enjoy practical instruction, take part in competitions, and obtain rewards and diplomas.
3. "Ateliers," or studios for practical instruction, in which also prizes can be obtained.
4. Collections of casts—copies of the works of the great masters—the Envois de Rome—certain of the prize drawings—and objects of art for instruction.
5. A magnificent art library.

The instruction given is gratuitous, the whole establishment being maintained by the Government, and the school is open to both sexes.

The limit of age for students is not less than *fifteen* years, nor more than *thirty* years.

Eighteen courses of lectures are given:

1. General History. 2. Anatomy. 3. Perspective for Painters and Architects (28 lectures). 4. Mathematics and Mechanism (36 lectures). 5. Descriptive Geometry (40 lectures). 6. Physics, Chemistry and Geology. 7. Stereotomy (25 lectures) and Surveying (6 lectures). 8. Construction: Theory (20 lectures); Practice (30 lectures). 9. Building Legislation and Practice (28 lectures). 10. The Theory of Architecture (35 lectures). 11. The Literature of Architecture. 12. History and Archæology. 13. The History of Art. 14. The History of Architecture (25 lectures). 15. The History of Mediæval and Renaissance Architecture in France. 16. Ornament. 17. Decorative Design. 18. Practical Sculpture.

Of these twelve at the least are specially appropriated for architects.

The Section of Architecture is divided into two classes—Second and First. For admission the following regulations are in force:

The Competitive Examinations for admission to the Second Class are held twice a year—in the autumn and in the spring.

Candidates for these examinations must enrol themselves in due form, with evidence of age, station, and capability, and if foreigners, with a letter of introduction from their Minister.

The applicants generally number between 400 or 500 at each period, and of these only 60 can be selected—120 in each year.

Candidates have to pass through six separate examinations or tests, viz.:

1. *Drawing*: An architectural composition of a given subject, to be executed "en loge" in one sitting of twelve hours.*

   This subject is set by a commission of two members of each of the four categories of the jury (Académie des Beaux-Arts; Professors of the École; permanent members; temporary members), and is adjudicated upon by the Acting Jury of Architecture.
2. *Drawing from the Cast*: A set head or ornament to be executed in eight hours.
3. *Modelling*: A set ornament in bas-relief from a cast, to be executed in eight hours.

   The subjects in drawing and modelling are set by a Commission of the Professors of Drawing, Modelling, and Ornament, and one member of each category of the jury as above. They are adjudicated upon by a mixed jury of the Professors of Drawing, Modelling, and Ornament, and ten painters, ten sculptors, and ten architects drawn by lot from the acting juries.

* In April 1900 458 candidates entered on this first stage: of these 143 were eliminated by the jury, leaving 315 to proceed, and to be thinned out in like manner at successive stages.

Candidates not obtaining a certain minimum of marks in each successive division—1, 2, 3—are at once eliminated, and at this stage the list of 120 names who have obtained the highest number of marks is made up—ninety being French candidates, and thirty foreigners. These represent double the number of candidates who can be admitted. The tests to further thin out this list then continue:—

4. *Mathematics*: Calculations done "en loge"—one subject being logarithms—and an examination in arithmetic, algebra, and geometry, in accordance with a detailed programme.
5. *Descriptive Geometry*: A study applied to the projection of an architectural subject to be executed "en loge" in eight hours; a general examination in Descriptive Geometry, in accordance with a detailed programme.

These divisions are adjudicated upon by the Professor of Mathematics. Candidates who do not obtain a certain minimum of marks in either of these (4 and 5) are eliminated.

6. *History*: An oral examination and written composition on General History, in accordance with a detailed programme—the East, Greece, and Rome, under 3, 6, and 8 heads respectively; and Modern History, under eighteen heads, chiefly relating to France. This is adjudicated upon by the Professor of General History.

The list of candidates to be admitted is then made up, the marks awarded being *multiplied by the prescribed coefficients for each division*, and the successful candidates being classed in order of merit. The forty-five French candidates who have obtained the highest number of marks, and not more than fifteen of the foreign candidates, are now admitted to the second class, taking place in their order after the existing members.

The Second Class.

The lists of students are drawn up in order, regulated by the number of "valeurs" or marks obtained in the competitions, and for new students in order of merit fixed by the entrance examination. The instruction given is provided by

I. Competitions ("concours") in architecture—divided into analytic exercises (studies of detail) and composition.
II. Competitions ("concours") on the subjects of scientific instruction.
III. The study of ornament.
IV. The study of figure drawing, and the modelling of ornament and of the figure.

I. *Competitions in Architecture.*

In each year these consist of

1. Six competitions on analytic elements (details of the Orders) or studies of composition of detail to a large scale.
2. Six competitions, of composition or design—the designs comprise sketch, plan, section, and elevation, on a given subject.

The sketches for each are made "en loge," each in a single sitting of twelve hours.

The design may be worked out in the atelier of the École, or in an external atelier, in two months.

Students can only be admitted to No. 2 after having obtained two "mentions" in No. 1.

The works are submitted to a jury composed of the special professors and of the Jury of Architecture, who can award to (1) second mention, and to (2) first and second mention.

There are two exercises each year in connection with the lectures on the History of Architecture: these are directed by the Professor of the History of Architecture, and consist of studies of details of architecture of different periods, to be executed in six days; and to these third-class medals and mention can be awarded.

II. *Competitions on Subjects of Scientific Instruction*

are held twice a year, and consist—

1. For *Mathematics and Mechanics*: in problems worked out "en loge," and in an examination on the subjects of the lectures, and are adjudicated upon by the Professor.
2. For *Descriptive Geometry*: in a certain number of diagrams, of which one at least is made "en loge," and an examination thereon and on the subjects of the lectures.
3. For *Stereotomy and Surveying*: in a certain number of diagrams made during the course, in one made "en loge" in eight hours on a special problem of stereotomy, and an examination thereon and on the subjects of the lectures.
4. For *Perspective*: in a certain number of sketches and drawings from nature; in diagrams, one of which at least must have been made "en loge"; and an examination thereon and on the subjects of the lectures.

2, 3, 4 are each adjudged on the sketches and diagrams and the reports of the special professors, by a mixed jury, constituted by the Professors of Descriptive Geometry, Stereotomy, Perspective, and Construction, and an equal number of members drawn by lot from the acting Jury of Architecture; this jury can award special medal (third class) and first mentions.

5. For *Construction*: in exercises performed "en loge" during the course, an oral examination at the conclusion of the theoretical part of the courses, and special examinations in the studio. In the execution of a scheme of general construction, which lasts three months and is followed by an oral examination thereon.

Before taking part in this division the student must have a "mention" in each of mathematics,

descriptive geometry, and stereotomy, and those only who have passed the oral examination in theory are admitted to take part in the scheme of general construction.

The decision on the scheme of general construction is given on the drawings and the report of the professors by a jury composed of the jury of architecture and of the professors of construction, descriptive geometry, and of stereotomy, who can award first, second, and third medals and mentions.

III. *Study of Ornament.*

The exercises, which are of dimensions fixed by the professors, are executed in twelve hours.

IV. *Simultaneous Study of Drawing and Modelling.*

1. Figure drawing from the cast.
2. Modelling ornaments—one the figure from the cast.

The exercises on each of these subjects are directed by a special Professor of Drawing and Sculpture, are of such dimensions as he may determine, are each to be executed in twelve hours, and are submitted to a mixed jury of the three Professors of the Simultaneous Study of the Three Arts, of the Professor of Decorative Composition, and of ten painters, ten sculptors, and ten architects, drawn by lot from the acting juries, who can award third-class medals and mentions.

In order to pass from the second class to the first class the student must have obtained

1. In Architecture six "valeurs," that is, two in the competitions of analytic elements, and four in the competitions for composition, of which two at least must be on given subjects.
2. In Mathematics, in Descriptive Geometry or Stereotomy, in Construction, in Perspective, a medal or a mention.
3. In Ornament, Figure Drawing, Ornament or Figure Modelling, studies of the History of Architecture, a medal or a mention.

A fairly successful student, giving up his whole time to the work, would probably occupy three years in gaining the required number of marks ("valeurs") to obtain admission to the first class.

THE FIRST CLASS.

The competitions open to the pupils of the first class are—

I. Competitions in Architecture.
II. A competition in Ornament and Decoration.
III. A competition relating to the lectures on the History of Architecture.

The *Competitions in Architecture* consist each year of—1. Six on given subjects. 2. Six on sketches of design.

All the sketches are executed "en loge," and each is completed in a single sitting of twelve hours.

For 1. First-class medals, first second-class medals, second second-class medals, and first mentions can be awarded, but the number of second second-class medals may not exceed five at each competition.

For 2. First second-class medals, and first and second mentions are awarded.

There are also in each year other competitions—

1. For the "Rongevin" prizes of 600 and 400 francs, awarded at the conclusion of a competition of Ornament and Decoration, executed "en loge" in seven days. For these first-class medals, first second-class medals, and first mentions are awarded.
2. For the "Godebœuf" prize of 740 francs, awarded by the acting Jury of Architecture on the result of a competition of a study of a special architectural work in ironwork, leadwork, marble, &c., worked out complete for execution, with details and profiles, the drawings being executed in the ateliers in fifteen days, after sketches made "en loge" in twelve hours. For these first-class medals, first second-class medals, and first mentions are awarded.
3. Two relating to the lectures on the History of Architecture. These consist of compositions reproducing a definite style of architecture, of which the programme is fixed by the Professor of the History of Architecture. The sketches for these designs are made "en loge," and the drawings are completed in ten days. For these first second-class medals and first mentions are awarded.

The simultaneous study of drawing and modelling is to instruct the painter in architecture and sculpture, the architect in drawing and sculpture, the sculptor in drawing and architecture.

The exercises in this school, which is open every day, consist—

1. In figure drawing from the life or the cast.
2. In modelling ornament and the figure from the cast.

Each work, of specified dimensions, is to be executed in twelve hours, and is adjudicated on by a mixed jury, composed of the three Professors of the Simultaneous Study of the Three Arts, the Professor of Decorative Composition, ten painters, ten sculptors, and ten architects, drawn by lot from the acting juries. Second-class medals and first mentions can be awarded.

Every year, at the conclusion of the course of lectures on the History of French Architecture, the Professor may award medals and mentions to those students who have shown most aptitude and have best profited by his instruction.

The Grand Medal of Emulation is awarded

each year to the student who has gained the highest number of "valeurs" in the various competitions of the year.

The awards of medals and mentions may be illustrated by the following examples of last year.

For a sketch competition, subject "A Pulpit," 118 designs were exhibited: three first second-class medals, two first and eight second mentions were awarded.

For a sketch competition, subject "A Synagogue," 124 designs were exhibited: the jury awarded three first-class medals, six first second-class medals, four second second-class medals, and eighty-three mentions.

For the "Prix Rongevin" 164 designs were submitted: the jury awarded a first prize and first-class medal, a second prize and first-class medal, three first-class medals, six second-class medals, and ninety-four mentions.

For the "Prix Godebœuf," subject a "Campanile of a Town Hall," 186 designs were submitted: the jury awarded six first-class medals, eight second-class medals, and ninety-six mentions.

For purposes of comparison, medals, mentions, &c., are converted into "valeurs" in accordance with an established valuation for each reward in each class: thus generally a first-class medal will represent three "valeurs," a first second-class two "valeurs," a second second-class one and half "valeurs," a first mention one "valeur," a second mention half "valeur"; while in the division of Construction a first-class medal represents five "valeurs," a second-class four "valeurs," a third-class three "valeurs," and a mention two "valeurs."

Various prizes are annually awarded—most founded by individuals. Such are—

The *Prix Muller-Sœhnée* of 539 francs, awarded to that pupil in the second class who has carried off the greatest number of "valeurs" in the year.

The *Prix Jay* of 700 francs, for the pupil in the second class who takes the first place in the competition in Construction.

The *Prix Jean Leclaire* of 500 francs, for the student who takes the shortest time in fulfilling the conditions for passing from the second to the first class.

The *Prix Jean Leclaire* of 500 francs, for the student of the first class who has gained the Grand Medal of Emulation.

The *Prix de la Société Centrale des Architectes*—the great medal of the Society—awarded annually to the student of the first class who has gained in the three preceding years the greatest number of "valeurs" in medals only in the competitions on set subjects.

The *Prix Abel Blouet* of 1,000 francs, awarded each year to the student of the first class who has gained the greatest number of "valeurs" since his entry into the school.

The *Prix Rongevin* of 600 and 400 francs, above described.

The *Prix Godebœuf* of 740 francs, above described.

The *Prix Edmond Labarre* of 200 francs, awarded in a competition of three days' design between students of first and second classes.

The *Prix Couvents-Daupeley*—five prizes of 753 francs 80 c. each—awarded each year to students little favoured by fortune, and whose work deserves encouragement.

The *Prix de Reconnaissance des Architectes Américains*, of 1,740 francs, founded by American architects in recognition of the instruction received by them at the school, is reserved exclusively for the French students of the section of Architecture, and is awarded as the result of a special competition.

There are also bursaries available under the *Fondation Chenavard* for assisting poor students ("Pauvres") in their studies.

The *Prix Saint-Agnan Boucher* of 1,000 francs is awarded every fourth year to the architect student who, having acquired the "valeurs" required to qualify for the diploma, has continued his studies and obtained the greatest number of "valeurs" for set subjects.

The drawings submitted in competition for prizes are publicly exhibited, and collections of phototypes of each year's work are published.*

The vacation is from August 1 to October 15: during this vacation rooms are available for pupils who desire to continue their studies. At the same time, subjects for design are set for pupils of the second and first classes.

There are three ateliers or studios available for architects, who, subject to the concurrence of the Professor ("Patron d'Atelier"), can select the studio in accordance with the date and order of their admission. These ateliers are open every day under the control of the Professors.

Beyond the limit of age (30 years) there is no restriction of the time which may be spent in the schools, except that in the second class any student who has not submitted two designs at least, or taken part in two competitions of analytic elements, or undergone two examinations, or submitted one design and undergone one examination, or gone through the competition of Construction, is considered as withdrawn, and can only re-enter the school by the ordinary course. Any student of the first class who has not submitted one design at the least, and taken part in one of the sixteen competitions of the year, is considered as having abandoned the intention of continuing his studies in the school.

At the end of each year a prize of 816 francs is

* *Les Médailles des Concours d'Architecture—de l'École Nationale des Beaux-Arts—et Grands Prix de Rome.*

1re Volume, 227 Phototypies, année scolaire 1898–1899.
2me " " " " 1899–1900.

awarded to that pupil of the studios who has gained the Great Medal of Emulation of the school.

The Study of Decorative Design—by Painters, Sculptors, and Architects.—A room is daily open for the study of Decorative Design by such painters as have obtained mention in Modelling and Architecture, sculptors who have obtained mention in Drawing and Architecture, and architects who have obtained mention in Drawing and Modelling. The studies consist of exercises in Decorative Design, combining the three arts, and directed by the Professor, and each occupies twenty-four hours' work—of either Drawing or Modelling. The works are judged by a jury of three Professors of the Simultaneous Study of the Three Arts, the Professor of Decorative Design, ten painters, ten sculptors, and ten architects drawn by lot from the active juries.

Once each year there are two competitions among the members of this class who have obtained the "mention" of the three arts, on a programme set by the Professors, the sketch design being made "en loge" in twelve hours, and the completed design within a month, in such form as to drawing and modelling and scale as the Professors may determine; the awards being made by a jury constituted as the last-mentioned, and being—a second-class medal and 200 francs; a first third-class medal and 150 francs; and a second third-class medal and 100 francs.

There are also yearly two competitions in Decorative Design open to students who have obtained the mention of the three arts. They are in two stages. For the first stage the competitors produce, "en loge," in twelve hours, a sketch design from the subject given. On these sketches are decided the six students in each section who shall be permitted to compete in the second stage. The second stage is the complete working out of the sketch design executed "en loge" in six days, either in drawing or modelling, and to a fixed scale. The awards are made by a similar jury to the last mentioned, and consist of a first-class medal and 300 francs; a first second-class medal and 250 francs; and a second second-class medal and 200 francs, and mentions.

The "Certificat d'Études" of the School is only granted to those pupils of the first class who have obtained either an award in the competition for the "Grand Prix de Rome" or a first-class medal, or two second-class medals, one at least of which must be for design, or five "valeurs," three of which must be for design.

Every year there is a public competition for the GRAND PRIX of Painting, Sculpture, and Architecture—open only to French subjects between fifteen and thirty years of age. The result is decided by the united sections of the Académie des Beaux-Arts, to each of which half of its number of outside artists is added—viz. seven painters, four sculptors, four architects, two engravers. Its awards may be the first "Grand Prix" and two other rewards, second "Grand Prix," or honourable mention.

The competitors each receive a grant-in-aid for their expenses, two-thirds of the total being paid during progress, as needed, and one-third being retained to the end, and being forfeited by those who do not comply with the conditions.

The preliminary trial is on a sketch made in twelve hours: from the authors of these the jury selects twenty-five for a second ordeal, which consists of another sketch to be made in twenty-four hours: from these ten candidates are chosen, who enter, "en loge," for the final competition.

The competition lasts 110 days. The competitors may make studies for this design outside, but can only bring, "en loge," such studies on tracing paper, the entire drawing of the design being made "en loge."

The designs successful in this competition have been published in collected forms, which provide an interesting record of progress in design, &c.*

The successful candidate becomes a "pensionnaire" of the Académie de France at Rome, at the Villa Médicis, on the Pincian,† and of the École Française at Athens, and receives 3,510 francs, or £300, yearly for his expenses. Four years are to be spent in study in Italy and Greece, and the results are yearly sent to Paris. The prescribed drawings to be produced are:—*First Year*, four sheets of details, quarter full size, from monuments in Rome or in Central Italy. *Second Year*, four sheets of details of ancient monuments of Italy, quarter full size. Details of Renaissance architecture. *Third Year*, two sheets of details from an ancient monument of Italy, Sicily, or Greece, quarter full size; a study of restoration of part of this monument; a study of restoration of part of the design and essential parts of the construction of the edifice—not less than four sheets, with explanatory memoir. Details of exterior and interior decoration of Middle Age and Renaissance architecture. *Fourth Year*, the restoration of a single edifice or group of buildings in Italy, Sicily, or Greece, with complete drawings of the present state; restoration studies and details, with an explanatory historical memoir.

Some idea of the thorough and complete nature of the studies made in these four years, and of the magnificent drawings produced, may be obtained by reference to published works.‡

* *Grand Prix d'Architecture* (1804–31): *Projets couronnés par l'Académie Royale des Beaux-Arts de France.* Par A. L. T. Vaudoyer et L. P. Baltard. Paris, 1818–34.

Les Grands Prix de Rome d'Architecture de 1850–1900. Reproduction en Phototypie des 1ers, 2mes et 2mes Seconds Grands Prix, avec les programmes des Concours (sujets donnés par l'Académie des Beaux-Arts). 4 vols. Paris, 1900.

† Baltard, Victor: *La Villa Médicis à Rome.* Dessinée, mesurée, et accompagnée d'un texte historique et explicatif. Paris, 1847.

‡ *Restaurations des Monuments Antiques, par les*

The admirable work done by the "Pensionnaires" is displayed in the two beautiful volumes of reproductions of selections from their drawings, recently published by M. D'Espouy, Professeur du Dessin Ornamental in the École. These instructive and valuable volumes should be carefully studied by young architects, not only as most important and useful records of details of historical monuments, but also as models of draughtsmanship which should awaken emulation, and the mere contemplation of them must produce a good effect.*

The "Diplôme d'Architecte."

The examinations for the Diploma are held in June and December of each year. A candidate for admission to them must have gained at the least ten "valeurs" of the first class in the competitions in Architecture; one "valeur" in the competition in the History of Architecture, Figure Drawing, and either Ornament or Figure Modelling; he must also produce a certificate that he has for at least one year attended works of construction under an official engineer or architect, or has himself directed such works.

Although the age limit of thirty years must be complied with as regards the acquisition of the requisite "valeurs," the Diploma may be obtained after that age.

The examination is written, graphic, and oral.

That in writing is devoted to the working out of two questions—one relating to the laws of building, the other to the practical execution of works, to each of which two hours are given.

That in drawing is a design in architecture for some important building, conceived and carried out as for actual execution. It comprises plans, elevations, and sections, figured, and includes all the details of construction, and is completed by a descriptive memoir and specification, quantities and estimate of part of the construction. The successful designs are now published in a collected form, of which two volumes have appeared, each containing about 250 phototypes.†

Each candidate may select the programme for his design, subject to rejection and revision by the architect member of the jury of examination, who may fix the scale to which it may be drawn. There is no limit of time for this work.

The oral examination is on the different parts of the design delivered, the theory and practice of the construction, the history of the style, the elements of physics and chemistry applicable to the construction, and the essential influences of the laws of building and responsibility.

The adjudication is made by a jury specially appointed each year, consisting of two of the Professors of Architecture, Chefs d'Atelier of the École chosen by lot, two professors heads of external ateliers chosen by lot from the permanent members of the Jury of Architecture, the Professors of the theory of Architecture, of Construction, of Physics and Chemistry, and of Building Legislation.

The candidate may be relegated to a succeeding session in any portion of a subject.

The Diploma was first established in 1862, when only five candidates passed. It made but little progress till 1883, at which period ninety-four had obtained the Diploma, and in that year there were twenty-four successful candidates. Their numbers have probably increased to about 100 in each year—in 1900, 98 candidates, students of 11 "ateliers" were successful, so that the principle is firmly established and fully appreciated. The holders of the Diploma have established the "Société des Architectes Diplômés par le Gouvernement," and the success and further development of the scheme must have a serious and beneficial effect in the future on the advancement of architects and the promotion of architecture.

Architectes Pensionnaires de l'Académie de France à Rome, depuis 1798 *à nos jours.* Avec les Mémoires explicatifs des Auteurs. 7 vols. fo. Paris, 1877–90.

* *Fragments d'Architecture Antique, d'après les Relevés et Restaurations des Anciens Pensionnaires de l'Académie de France à Rome.* Publiés sous la direction de H. D'Espouy, Professeur à l'École des Beaux-Arts. fo. Paris, 1899.

Fragments d'Architecture du Moyen-Age et de la Renaissance, d'après les Relevés et Restaurations des Anciens Pensionnaires de l'Académie de France à Rome. Publiés sous la direction de H. D'Espouy, Professeur à l'École des Beaux-Arts. fo. Paris, 1900.

† *Les Diplômés d'Architecte; Concours de l'École Nationale des Beaux-Arts; Projets d'Architecture des Élèves de l'École, donnant droit au titre officiel:* "Architecte Diplômé par le Gouvernement Français." fo. Paris.

*** This article is based on the official "Règlement" and "Programmes" for 1900, further information kindly furnished by M. Henry. Jouin, Secrétaire de l'École, and other sources. Reference has also been made to the following works, viz.: Müntz (Eugène): *Guide de l'École Nationale des Beaux-Arts, avec plans et vues.* Paris, 1889.—Lemaistre (Alexis): *L'École des Beaux-Arts, dessinée et racontée par un élève.* Paris, 1889.—Rousselet (Louis): *Nos Grandes Écoles Militaires et Civiles.* 3e edition, Paris, 1892.—*L'École des Beaux-Arts*, pp. 323–408.—Rousselet (Louis): *Nos Grandes Écoles d'Application Militaires et Civiles.* Paris, 1895.—*L'Académie de France à Rome. La Villa Médicis*, pp. 419–485.—White, (W. H.): *A Brief Review of the Education and Position of Architects in France since the year* 1671. *Transactions* R.I.B.A., Session 1883–84, pp. 93–120, with Plans of the Palais des Beaux-Arts.—Spiers (R. Phené): *The French Diplôme d'Architecte and the German System of Architectural Education. Transactions* R.I.B.A., Session 1883–84, pp. 121–132.—White (W. H.): *Architecture and Public Buildings: Their relation to School, Academy, and State, in Paris and London.* 8o. London, 1884, pp. 1–63.